* Paul Schulwitz please. Please return all attachments with search results. thanks.

Access DB# 114751

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MOLLY CEPERLEY Examiner #: 59757 Date: 02/19/04
Art Unit: 1641 Phone Number ~~30~~ 2-0813 Serial Number: 10/000,172
Mail Box and Bldg/Room Location: Rem 3A51 Results Format Preferred (circle): PAPER DISK E-MAIL
3C70

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Molecular Labeling and Assay Systems using poly(amino acid) Metal Ion complexes as linkers
Inventors (please provide full names): Jesse Twu

Earliest Priority Filing Date: 11/30/00

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

① Please search for the compound of claim 1.
Prefer T = protein (also any specific binding pair member defined in Table 1, p.12)
P = polyhistidine
L = rhodamine (TEXAS RED®) ← [please also search L of claims 9 & 10 + pages 14-15 (terms in yellow)]
M = Ni^{+2}
(polyhistidine/Ni complexes are known)
↳ this is used to link a dye (L) to a specific binding member (T)

→ looking for a polyhistidine/nickel complex attached to a dye. Polyhistidine further attached to a member of a specific binding pair (see Table 1).

Terms:
luminophore, luminescence, luminescent energy transfer (between donor and acceptor), fluorophore, fluorescent, luminescence polarization

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher:	NA Sequence (#)	STN 378.05
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 2/27	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 30	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 35	Other	Other (specify)

PTO-1590 (8-01)

L4 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:462548 HCAPLUS
DOCUMENT NUMBER: 137:30228
TITLE: Use of a poly(amino-acid)-metal ion complex to link a **label** to a species of interest
INVENTOR(S): **Twu, Jesse J.**
PATENT ASSIGNEE(S): Molecular Devices Corporation, USA
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1215501	A1	20020619	EP 2001-310076	20011130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002132254	A1	20020919	US 2001-172	20011130

PRIORITY APPLN. INFO.: US 2000-250681P P 20001130

AB Systems, including compns. and methods, for purifying and/or labeling proteins or other mols. of interest and/or for assaying the conformational and/or binding states of such mols. are described. The compns. may include products having the formula T-P-M-L where T is a species, M is a metal ion, P is a peptide or protein that binds the metal ion, and L is a luminescent label. The methods may include purifying and/or labeling a mol. of interest, detecting luminescence energy transfer, detecting dissocn. and/or assocn. of a mol. or mols. of interest, detecting a conformational change in a mol. of interest, and detecting an analyte, among others.

IC ICM G01N033-58
CC 9-5 (Biochemical Methods)
ST poly amino acid metal ion complex labeling; peptide metal ion complex luminescent label; luminescence energy transfer assay label; conformation assay label
IT Phosphopeptides
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(complexes with metal ion and conjugates with mol. of interest; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Dissociation
Molecular association
(detection of; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Stains, biological
(for nucleic acid; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Drugs
(labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Antibodies
Lipids, uses
Polymers, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(labeled; poly(amino acid)-metal ion complexes to link labels to

species of interest)
IT Amino acids, reactions
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Nucleic acids
Oligonucleotides
Proteins
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Nucleotides, preparation
Polysaccharides, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Energy transfer
(luminescence; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Peptides, preparation
Proteins
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(metal ion complexes; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Microarray technology
(microfluidic chip; poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Buffers
Calibration
Conformation
Cyanine dyes
Fluorescent dyes
Fluorescent substances
Luminescent substances
Microtiter plates
Polarized luminescence
Purification
Test kits
(poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Enzymes, uses
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(poly(amino acid)-metal ion complexes to link labels to species of interest)
IT Polyamides, preparation
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic

preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(poly(amino acids), metal ion complexes; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Microparticles
(polymeric, labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Conformation
(protein; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Molecules
(purifn. or labeling of; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Proteins
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(purifn. or labeling of; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(stains for; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Dyes
(styryl; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Coordination compounds
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(with poly(amino acid); poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Dyes
(xanthene; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **71-00-1**, Histidine, properties
RL: PRP (Properties)
(peptide contg.; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **51-17-2D**, Benzimidazole, compds., conjugates with metal ion complexes **91-20-3D**, Naphthalene, compds., conjugates with metal ion complexes **91-64-5D**, Coumarin, compds., conjugates with metal ion complexes **92-81-9D**, Carbazine, compds., conjugates with metal ion complexes **120-12-7D**, Anthracene, compds., conjugates with metal ion complexes **129-00-0D**, Pyrene, compds., conjugates with metal ion complexes **135-67-1D**, Phenoxazine, compds., conjugates with metal ion complexes **139-13-9D**, Nitrilotriacetic acid, conjugates with fluorescent dye and complexes with metal ion **218-01-9D**, Chrysene, compds., conjugates with metal ion complexes **260-94-6D**, Acridine, compds., conjugates with metal ion complexes **588-59-0D**, Stilbene, compds., conjugates with metal ion complexes **2321-07-5D**, Fluorescein, compds., conjugates with metal ion complexes **3086-44-0D**, Rhodol, compds., conjugates with metal ion complexes **3546-21-2D**, Ethidium, compds., conjugates with metal ion complexes **6837-70-3D**, Rosamine, compds., conjugates with metal ion complexes **13558-31-1D**, compds., conjugates with metal ion complexes **14701-22-5D**, complexes with peptide and conjugates with luminophor, uses **20074-52-6D**, Ferric ion, complexes with

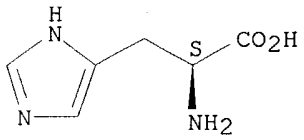
phosphopeptide and conjugates with luminophor, uses **22537-33-3D**, Gallium, ion (Ga3+), complexes with phosphopeptide and conjugates with luminophor, uses **22541-18-0D**, Eu+3, complexes with poly(amino acid) and conjugates with luminophor, uses **22541-20-4D**, Terbium, ion (Tb3+), complexes with poly(amino acid) and conjugates with luminophor, uses **36015-30-2D**, Propidium, compds., conjugates with metal ion complexes **138026-71-8D**, Dipyrromethene boron difluoride, compds., conjugates with metal ion complexes **436139-07-0D**, compds., conjugates with metal ion complexes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **71-00-1**, Histidine, properties
RL: PRP (Properties)
(peptide contg.; poly(amino acid)-metal ion complexes to link labels to species of interest)

RN 71-00-1 HCAPLUS

CN L-Histidine (9CI) (CA INDEX NAME)

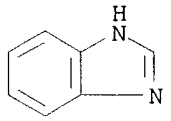
Absolute stereochemistry. Rotation (-).



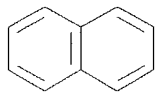
IT **51-17-2D**, Benzimidazole, compds., conjugates with metal ion complexes **91-20-3D**, Naphthalene, compds., conjugates with metal ion complexes **91-64-5D**, Coumarin, compds., conjugates with metal ion complexes **92-81-9D**, Carbazine, compds., conjugates with metal ion complexes **120-12-7D**, Anthracene, compds., conjugates with metal ion complexes **129-00-0D**, Pyrene, compds., conjugates with metal ion complexes **135-67-1D**, Phenoxazine, compds., conjugates with metal ion complexes **139-13-9D**, Nitrilotriacetic acid, conjugates with fluorescent dye and complexes with metal ion **218-01-9D**, Chrysene, compds., conjugates with metal ion complexes **260-94-6D**, Acridine, compds., conjugates with metal ion complexes **588-59-0D**, Stilbene, compds., conjugates with metal ion complexes **2321-07-5D**, Fluorescein, compds., conjugates with metal ion complexes **3086-44-0D**, Rhodol, compds., conjugates with metal ion complexes **3546-21-2D**, Ethidium, compds., conjugates with metal ion complexes **6837-70-3D**, Rosamine, compds., conjugates with metal ion complexes **13558-31-1D**, compds., conjugates with metal ion complexes **14701-22-5D**, complexes with peptide and conjugates with luminophor, uses **20074-52-6D**, Ferric ion, complexes with phosphopeptide and conjugates with luminophor, uses **22537-33-3D**, Gallium, ion (Ga3+), complexes with phosphopeptide and conjugates with luminophor, uses **22541-18-0D**, Eu+3, complexes with poly(amino acid) and conjugates with luminophor, uses **22541-20-4D**, Terbium, ion (Tb3+), complexes with poly(amino acid) and conjugates with luminophor, uses **36015-30-2D**, Propidium, compds., conjugates with metal ion complexes **138026-71-8D**, Dipyrromethene boron difluoride, compds., conjugates with metal ion complexes **436139-07-0D**, compds., conjugates with metal ion complexes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(poly(amino acid)-metal ion complexes to link labels to species of interest)

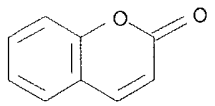
RN 51-17-2 HCAPLUS
CN 1H-Benzimidazole (9CI) (CA INDEX NAME)



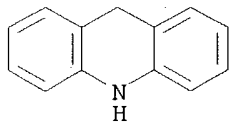
RN 91-20-3 HCAPLUS
CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



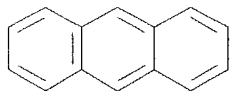
RN 91-64-5 HCAPLUS
CN 2H-1-Benzopyran-2-one (9CI) (CA INDEX NAME)



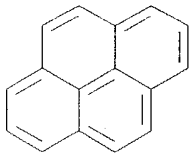
RN 92-81-9 HCAPLUS
CN Acridine, 9,10-dihydro- (9CI) (CA INDEX NAME)



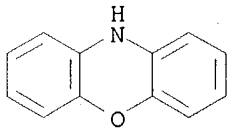
RN 120-12-7 HCAPLUS
CN Anthracene (8CI, 9CI) (CA INDEX NAME)



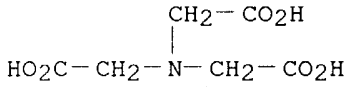
RN 129-00-0 HCAPLUS
CN Pyrene (8CI, 9CI) (CA INDEX NAME)



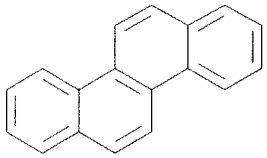
RN 135-67-1 HCAPLUS
CN 10H-Phenoxazine (9CI) (CA INDEX NAME)



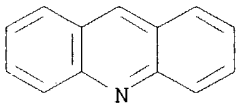
RN 139-13-9 HCAPLUS
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



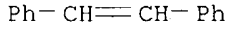
RN 218-01-9 HCAPLUS
CN Chrysene (8CI, 9CI) (CA INDEX NAME)



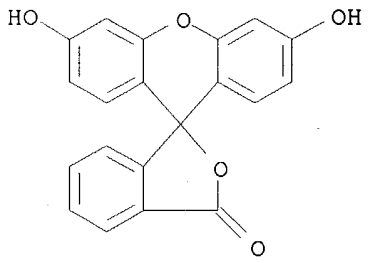
RN 260-94-6 HCAPLUS
CN Acridine (8CI, 9CI) (CA INDEX NAME)



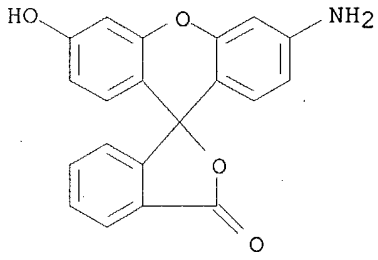
RN 588-59-0 HCAPLUS
CN Benzene, 1,1'-(1,2-ethenediyl)bis- (9CI) (CA INDEX NAME)



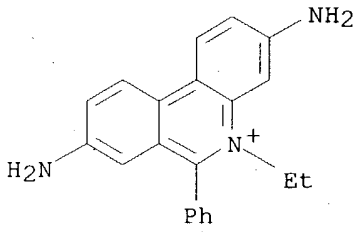
RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)



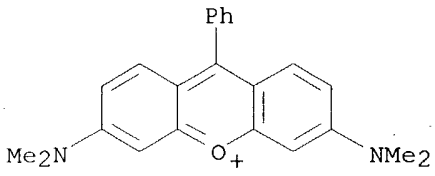
RN 3086-44-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3'-amino-6'-hydroxy- (9CI) (CA INDEX NAME)



RN 3546-21-2 HCAPLUS
CN Phenanthridinium, 3,8-diamino-5-ethyl-6-phenyl- (8CI, 9CI) (CA INDEX NAME)

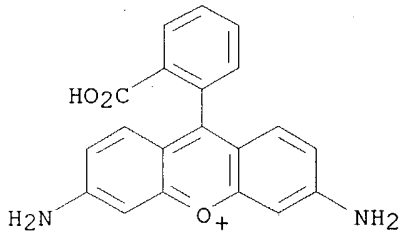


RN 6837-70-3 HCAPLUS
CN Xanthylium, 3,6-bis(dimethylamino)-9-phenyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 13558-31-1 HCAPLUS
CN Xanthylium, 3,6-diamino-9-(2-carboxyphenyl)-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

Ni^{2+}

RN 20074-52-6 HCAPLUS
CN Iron, ion (Fe3+) (8CI, 9CI) (CA INDEX NAME)

Fe^{3+}

RN 22537-33-3 HCAPLUS
CN Gallium, ion (Ga3+) (8CI, 9CI) (CA INDEX NAME)

Ga^{3+}

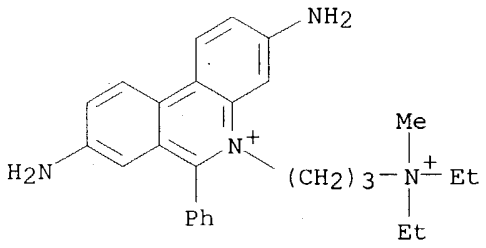
RN 22541-18-0 HCAPLUS
CN Europium, ion (Eu3+) (8CI, 9CI) (CA INDEX NAME)

Eu^{3+}

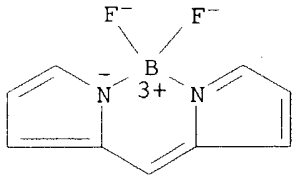
RN 22541-20-4 HCAPLUS
CN Terbium, ion (Tb3+) (8CI, 9CI) (CA INDEX NAME)

Tb^{3+}

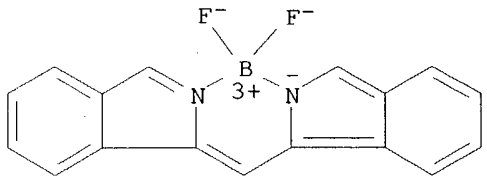
RN 36015-30-2 HCAPLUS
CN Phenanthridinium, 3,8-diamino-5-[3-(diethylmethylammonio)propyl]-6-phenyl- (9CI) (CA INDEX NAME)



RN 138026-71-8 HCAPLUS
CN Boron, difluoro[2-[(2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrolato-.kappa.N]-, (T-4)- (9CI) (CA INDEX NAME)



RN 436139-07-0 HCAPLUS
CN Boron, difluoro[1-[(2H-isoindol-1-yl-.kappa.N)methylene]-1H-isoindolato-.kappa.N]-, (T-4)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d que 162
L53       36735 SEA FILE=USPATFULL ABB=ON  PLU=ON  HISTIDINE OR POLYHISTIDINE
L54      266073 SEA FILE=USPATFULL ABB=ON  PLU=ON  NI OR NICKEL
L56       29551 SEA FILE=USPATFULL ABB=ON  PLU=ON  LUMINOPHOR? OR FLUOROPHOR?
                OR XANTHEN? ORE FLUORESCEIN OR ROSAMINE OR RHODAMINE OR RHODOL
                OR CASCADE BLUE OR BENZOBODIP? OR TEXAS RED
L61          24 SEA FILE=USPATFULL ABB=ON  PLU=ON  L53(S)L54(S)L56
L62          24 SEA FILE=USPATFULL ABB=ON  PLU=ON  L61 AND LABEL?


=> d bib ab 1-24

L62  ANSWER 1 OF 24  USPATFULL on STN
AN     2004:44610  USPATFULL
TI     Biotinylation of proteins
IN     Zhang, Lin, O'Fallon, MO, UNITED STATES
PI     US 2004033603      A1   20040219
AI     US 2002-223560     A1   20020819 (10)
DT     Utility
FS     APPLICATION
LREP   Donald R. Holland, Harness, Dickey & Pierce, P.L.C., 7700 Bonhomme,
       Suite 400, Clayton, MO, 63105
CLMN   Number of Claims: 214
ECL    Exemplary Claim: 1
DRWN   7 Drawing Page(s)
LN.CNT 1708
AB     A eukaryotic bicistronic expression system for in vivo biotinylation of
       a protein is disclosed. The bicistronic expression system is based upon
       a polynucleotide which comprises a nucleic acid encoding a fusion
       protein made up of a selected protein and a biotinylation peptide, a
       nucleic acid sequence coding for an internal ribosome entry site and a
       nucleic acid sequence encoding a biotin ligase. Also disclosed are
       vectors and host cells containing the nucleic acid as well as methods
       for preparing a biotinylation protein and kits comprising the nucleic
       acid.

L62  ANSWER 2 OF 24  USPATFULL on STN
AN     2004:4515  USPATFULL
TI     Compositions and methods relating to cyclic compounds that undergo
       nucleotide base pair-specific interactions with double-stranded nucleic
       acids
IN     Dervan, Peter B., San Marino, CA, United States
       Baird, Eldon E., Halfmoon Bay, CA, United States
PA     California Institute of Technology, Pasadena, CA, United States (U.S.
       corporation)
PI     US 6673940         B1   20040106
AI     US 2000-479279          20000106 (9)
PRAI   US 1999-115232P     19990108 (60)
DT     Utility
FS     GRANTED
EXNAM  Primary Examiner: Low, Christopher S. F.; Assistant Examiner: Kam,
       Chih-Min
LREP   Foley & Lardner
CLMN   Number of Claims: 25
ECL    Exemplary Claim: 1
DRWN   21 Drawing Figure(s); 13 Drawing Page(s)
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LN.CNT 2284
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The design, synthesis, and use of cyclic compounds, including cyclic polyamides, is described. Such compounds comprise at least two polymer portions, one of which comprises at least three molecular units, and the other comprises at least four molecular units. At least one molecular unit of such a compound is a hydrogen bond donor or acceptor. The polymer portions are covalently linked to form a cycle. These compounds are capable of targeting specific nucleotide sequences in double-stranded nucleic acids, particularly double-stranded DNA. Accordingly, such compounds can be used to modulate, e.g., increase or decrease, the expression of one or more genes in vitro or in vivo.

L62 ANSWER 3 OF 24 USPATFULL on STN
AN 2004:2416 USPATFULL
TI Human voltage gated sodium channel beta1A subunit and methods of use
IN Qin, Ning, Blue Bell, PA, UNITED STATES
Codd, Ellen, Blue Bell, PA, UNITED STATES
D'Andrea, Michael, Cherry Hill, NJ, UNITED STATES
PI US 2004002439 A1 20040101
AI US 2003-401916 A1 20030328 (10)
RLI Division of Ser. No. US 2001-875456, filed on 6 Jun 2001, PENDING
PRAI US 2000-294405P 20000607 (60)
US 2000-236664P 20000929 (60)
DT Utility
FS APPLICATION
LREP PHILIP S. JOHNSON, JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 2945
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB DNAs encoding human voltage gated sodium channel .beta.1A subunit have been cloned and characterized. The recombinant protein is capable of forming biologically active protein. The cDNA's have been expressed in recombinant host cells that produce active recombinant protein. The recombinant protein is also purified from the recombinant host cells. In addition, the recombinant host cells are utilized to establish a method for identifying modulators of the receptor activity, and receptor modulators are identified.

L62 ANSWER 4 OF 24 USPATFULL on STN
AN 2003:321334 USPATFULL
TI Inhibition of gene transcription by polyamide DNA-binding ligands
IN Gottesfeld, Joel M., Del Mar, CA, United States
Dervan, Peter B., San Marino, CA, United States
Mosier, Donald E., Del Mar, CA, United States
Baird, Eldon E., Lexington, SC, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
PI US 6660255 B1 20031209
WO 9835702 19980820
AI US 2000-367513 20000425 (9)
WO 1998-US2444 19980211

PRAI US 1997-38384P 19970214 (60)
US 1997-38394P 19970214 (60)
US 1997-56048P 19970902 (60)
US 1997-58338P 19970910 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Travers, Russell; Assistant Examiner: Wang, Shengjun
LREP Morrison & Foerster LLP
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 61 Drawing Figure(s); 38 Drawing Page(s)
LN.CNT 2780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides polyamides suitable for modulating cellular or viral gene expression by binding to an identified target DNA sequence adjacent to the binding site of a minor groove transcription factor protein. The polyamides of the present invention are useful for the treatment of a human infected with a virus such as HIV-1. The polyamides of the present invention are also useful for the treatment of conditions, such as cancers, that result from the expression or over-expression of cellular genes, particularly oncogenes.

L62 ANSWER 5 OF 24 USPATFULL on STN
AN 2003:312172 USPATFULL
TI Methods for genetic analysis of DNA using biased amplification of polymorphic sites
IN Olson, Jeffrey, Chelmsford, MA, UNITED STATES
Zillmann, Martin, Shrewsbury, MA, UNITED STATES
Stanton, Vincent P., JR., Belmont, MA, UNITED STATES
PA Variagenics, Inc. a Delaware corporation (U.S. corporation)
PI US 2003219769 A1 20031127
AI US 2002-287964 A1 20021105 (10)
RLI Continuation of Ser. No. US 2000-696998, filed on 25 Oct 2000, GRANTED, Pat. No. US 6475736
PRAI US 2000-206613P 20000523 (60)
DT Utility
FS APPLICATION
LREP ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 35 Drawing Page(s)
LN.CNT 5479
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for determing genotypes and haplotypes of genes are described. Also described are single nucleotide polymorphisms and haplotypes in the ApoE gene and methods of using that information.

L62 ANSWER 6 OF 24 USPATFULL on STN
AN 2003:279079 USPATFULL
TI Complex formation between DSDNA and oligomer of cyclic heterocycles
IN Dervan, Peter B., San Marino, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 6635417 B1 20031021
AI US 1997-853522 19970508 (8)
RLI Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997,

now patented, Pat. No. US 6143901 Continuation-in-part of Ser. No. US 607078, now patented, Pat. No. US 6090947
PRAI US 1997-38384P 19970214 (60)
US 1996-26713P 19960925 (60)
US 1996-24374P 19960801 (60)
US 1996-23309P 19960731 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Marschel, Ardin H.
LREP Warburg, Richard J., Foley & Lardner
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 2564
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for forming complexes between dsDNA and oligomers of heterocycles, aliphatic amino acids, particularly omega-amino acids, and a polar end group. By appropriate choice of target sequences and composition of the oligomers, complexes are obtained with low dissociation constants. The formation of complexes can be used for identification of specific dsDNA sequences, for inhibiting gene transcription, and as a therapeutic for inhibiting proliferation of undesired cells or expression of undesired genes.

L62 ANSWER 7 OF 24 USPATFULL on STN
AN 2003:219722 USPATFULL
TI Biosensors, method for obtaining the same and uses thereof
IN Renard, Martial, Paris, FRANCE
Belkadi, Laurent, rue louis Rolland, FRANCE
England, Patrick, Paris, FRANCE
Bedouelle, Hugues, Paris, FRANCE
PI US 2003153012 A1 20030814
AI US 2002-204431 A1 20020830 (10)
WO 2001-FR603 20010301
PRAI FR 2000-2657 20000301
DT Utility
FS APPLICATION
LREP OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA, 22314
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 1640
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention concerns biosensors, the method for obtaining them and their uses in particular for detecting, assaying or locating, in direct immunofluorescence, a ligand such as an antigen or a hapten, in a heterogeneous population. Said biosensors consist of (i) at least a protein-type receptor fragment, capable of binding with a suitable ligand via an active site and in which fragment, at least one of its amino acid residues, located in the proximity of said active site is naturally present in the form of a Cys residue or is substituted in Cys residue, and (ii) a fluorophore coupled with said Cys residue(s).

L62 ANSWER 8 OF 24 USPATFULL on STN
AN 2003:140487 USPATFULL
TI Serine/threonine hydrolase proteins and screening assays

IN Smith, Jeffrey W., San Diego, CA, UNITED STATES
Kridel, Steven J., San Diego, CA, UNITED STATES
Axelrod, Fumiko T., San Diego, CA, UNITED STATES
PI US 2003096328 A1 20030522
AI US 2002-237271 A1 20020904 (10)
PRAI US 2001-317842P 20010906 (60)
DT Utility
FS APPLICATION
LREP GARY CARY WARE & FRIENDENRICH LLP, 4365 EXECUTIVE DRIVE, SUITE 1600, SAN DIEGO, CA, 92121-2189
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 2267
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Proteins specific for prostate epithelial cells, normal or neoplastic, are identified and used for diagnosis, development of antibodies, and for evaluating drugs that react with the neoplastic specific proteins. Affinity based probes are used that react specifically with the active site to provide a measure of the enzyme activity of the cells. Prostate epithelial neoplastic cells can be used in screening candidate drugs for their effect in changing the proteome profile as to the serine-threonine hydrolase enzymes, using the affinity based probes for determining the profile.

L62 ANSWER 9 OF 24 USPATFULL on STN
AN 2003:120054 USPATFULL
TI Methods for genetic analysis of DNA to detect sequence variances
IN Stanton, Vincent P., JR., Belmont, MA, UNITED STATES
PI US 2003082537 A1 20030501
AI US 2001-863733 A1 20010523 (9)
RLI Continuation-in-part of Ser. No. US 2000-697028, filed on 25 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2000-696998, filed on 25 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2001-967013, filed on 28 Sep 2001, PENDING
PRAI US 2000-206613P 20000523 (60)
DT Utility
FS APPLICATION
LREP ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
CLMN Number of Claims: 72
ECL Exemplary Claim: 1
DRWN 43 Drawing Page(s)
LN.CNT 5382
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for determing genotypes and haplotypes of genes are described. Also described are single nucleotide polymorphisms and haplotypes in the ApoE gene and methods of using that information.

L62 ANSWER 10 OF 24 USPATFULL on STN
AN 2003:115919 USPATFULL
TI Preparation and use of bifunctional molecules having DNA sequence binding specificity
IN Dervan, Peter B., San Marino, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 6555692 B1 20030429

AI US 2001-921514 20010801 (9)
RLI Continuation of Ser. No. US 1999-414611, filed on 8 Oct 1999, now patented, Pat. No. US 6506906 Continuation-in-part of Ser. No. WO 1998-US6997, filed on 8 Apr 1998 Continuation-in-part of Ser. No. WO 1997-US12722, filed on 21 Jul 1997 Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997, now patented, Pat. No. US 6143901 Continuation-in-part of Ser. No. US 1996-607078, filed on 26 Feb 1996, now patented, Pat. No. US 6090947, issued on 18 Jul 2000
PRAI US 1997-42002P 19970416 (60)
US 1997-43444P 19970408 (60)
US 1997-43446P 19970408 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: McKane, Joseph K.; Assistant Examiner: Small, Andrea D.
LREP Foley & Lardner
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 54 Drawing Figure(s); 46 Drawing Page(s)
LN.CNT 5488
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel small molecule polyamides that specifically bind with subnanomolar affinity to a predetermined sequence with potential use in molecular biology and human medicine are described. The designed compounds which target the minor groove of B-form double helical DNA offer a general approach for the control of gene-expression. Simple rules are disclosed which provide for rational control of the DNA-binding sequence specificity of synthetic polyamides containing N-methylpyrrole and N-methylimidazole amino acids. A series of molecular templates for polyamide design are disclosed which provide for small molecules which recognize predetermined DNA sequences with affinities and specificities comparable to sequence-specific DNA-binding proteins. The pyrrole-imidazole polyamides described herein represent a class of designed small molecules that can bind any predetermined sequence of double helical DNA.

L62 ANSWER 11 OF 24 USPATFULL on STN
AN 2003:106190 USPATFULL
TI Restriction enzyme genotyping
IN Olson, Jeffrey, Chelmsford, MA, UNITED STATES
Zillmann, Martin, Shrewsbury, MA, UNITED STATES
Stanton, Vincent P., JR., Belmont, MA, UNITED STATES
PI US 2003073101 A1 20030417
AI US 2002-116420 A1 20020404 (10)
RLI Continuation-in-part of Ser. No. US 2001-863733, filed on 23 May 2001, PENDING Continuation-in-part of Ser. No. US 2000-697028, filed on 25 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2000-696998, filed on 25 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2000-697013, filed on 25 Oct 2000, PENDING
PRAI US 2000-206613P 20000523 (60)
DT Utility
FS APPLICATION
LREP ANITA L. MEIKLEJOHN, PH.D., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 45 Drawing Page(s)

LN.CNT 4670
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for determing genotypes and haplotypes of genes are described. Also described are single nucleotide polymorphisms and haplotypes in the ApoE gene and methods of using that information.

L62 ANSWER 12 OF 24 USPATFULL on STN
AN 2003:60069 USPATFULL
TI Nucleic acid sequencing using an optically **labeled** pore
IN Russell, Terence S., Braintree, MA, United States
PA LifeBeam Technologies, Inc., Braintree, MA, United States (U.S. corporation)
PI US 6528258 B1 20030304
AI US 2000-653046 20000901 (9)
PRAI US 1999-158703P 19991008 (60)
US 1999-152465P 19990903 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fredman, Jeffrey
LREP Choate, Hall & Stewart, Herschbach Jarrell, Brenda, Baker, C. Hunter
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 1457
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a system for analyzing polymer molecules by detecting their effects on an optical agent. Certain preferred embodiments of the invention involve the analysis of polynucleotide molecules through detection of their quenching effects on a fluorescent reporter.

L62 ANSWER 13 OF 24 USPATFULL on STN
AN 2003:13401 USPATFULL
TI Preparation and use of bifunctional molecules having DNA sequence binding specificity
IN Dervan, Peter B., San Marino, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 6506906 B1 20030114
AI US 1999-414611 19991008 (9)
RLI Continuation of Ser. No. WO 1998-US6997, filed on 8 Apr 1998
Continuation-in-part of Ser. No. WO 1997-US12722, filed on 21 Jul 1997
Continuation-in-part of Ser. No. US 1997-853522, filed on 8 May 1997
Continuation-in-part of Ser. No. WO 1997-US3332, filed on 20 Feb 1997
Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997
Continuation-in-part of Ser. No. US 1996-607078, filed on 26 Feb 1996
PRAI US 1997-42002P 19970416 (60)
US 1997-43446P 19970408 (60)
US 1997-43444P 19970408 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Lambkin, Deborah C.
LREP Foley & Lardner
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 54 Drawing Figure(s); 46 Drawing Page(s)
LN.CNT 5469

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Small molecule polyamides that specifically bind with subnanomolar affinity to any predetermined sequence in the human genome with potential use in molecular biology and human medicine are described. Further, the designed compounds which target the minor groove of B-form double helical DNA offer a general approach for the control of gene-expression. Simple rules are disclosed which provide for rational control of the DNA-binding sequence specificity of synthetic polyamides containing N-methylpyrrole and N-methylimidazole amino acids. A series of molecular templates for polyamide design are disclosed which provide for small molecules which recognize predetermined DNA sequences with affinities and specificities comparable to sequence-specific DNA-binding proteins such as transcription factors. These design rule are applied to provide a polyamide for specific targeting of a predetermined 7 base pair sequence from a conserved HIV gene promoter at subnanomolar concentration. The pyrrole-imidazole polyamides described herein represent the only class of designed small molecules to date that can bind any predetermined sequence of double helical DNA.

L62 ANSWER 14 OF 24 USPATFULL on STN
AN 2002:322488 USPATFULL
TI Proteomic analysis
IN Cravatt, Benjamin F., La Jolla, CA, UNITED STATES
Sorensen, Erik, San Diego, CA, UNITED STATES
Patricelli, Matthew P., San Diego, CA, UNITED STATES
Lovato, Martha, San Diego, CA, UNITED STATES
Adam, Gregory, San Diego, CA, UNITED STATES
PI US 2002182652 A1 20021205
AI US 2002-158498 A1 20020529 (10)
RLI Division of Ser. No. US 2000-738954, filed on 15 Dec 2000, PENDING
PRAI US 2000-195954P 20000410 (60)
US 2000-212891P 20000620 (60)
US 2000-222532P 20000802 (60)
DT Utility
FS APPLICATION
LREP GARY CARY WARE & FRIENDENRICH LLP, 4365 EXECUTIVE DRIVE, SUITE 1600, SAN DIEGO, CA, 92121-2189
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 3576
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods for analyzing proteomes, as cells or lysates. The analysis is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compound libraries that are used for the identification of lead molecules, and for the parallel identification of their biological targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compounds, referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biological activities or target proteins.

L62 ANSWER 15 OF 24 USPATFULL on STN

AN 2002:290732 USPATFULL
TI Methods for genetic analysis of DNA using biased amplification of polymorphic sites
IN Stanton, Jr., Vincent P., Belmont, MA, United States
PA Variagenics, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 6475736 B1 20021105
AI US 2000-696998 20001025 (9)
PRAI US 2000-206613P 20000523 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Benzion, Gary; Assistant Examiner: Chunduru, Suryaprabha
LREP Fish & Richardson, P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 35 Drawing Figure(s); 35 Drawing Page(s)
LN.CNT 4417
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for determining genotypes and haplotypes of genes are described. Also described are single nucleotide polymorphisms and haplotypes in the ApoE gene and methods of using that information.

L62 ANSWER 16 OF 24 USPATFULL on STN
AN 2002:283380 USPATFULL
TI Polyamides for binding in the minor groove of double stranded DNA
IN Baird, Eldon E., Foster City, CA, United States
Dervan, Peter B., San Marino, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 6472537 B1 20021029
AI US 1999-372473 19990811 (9)
RLI Continuation-in-part of Ser. No. WO 1997-US12722, filed on 21 Jul 1997 Continuation-in-part of Ser. No. WO 1997-US3332, filed on 20 Feb 1997 Continuation-in-part of Ser. No. US 1997-853522, filed on 8 May 1997, now abandoned Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997, now patented, Pat. No. US 6143901 Continuation-in-part of Ser. No. US 1996-607078, filed on 26 Feb 1996, now patented, Pat. No. US 6090947
PRAI WO 1998-US1006 19980128
US 1997-42022P 19970406 (60)
US 1997-43444P 19970408 (60)
US 1997-38384P 19970214 (60)
US 1996-26713P 19960925 (60)
US 1996-24374P 19960801 (60)
US 1996-23309P 19960731 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Lambkin, Deborah C.
LREP Foley & Lardner
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 21 Drawing Figure(s); 18 Drawing Page(s)
LN.CNT 3089
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention encompasses improved polyamides for binding to specific nucleotide sequences in the minor groove of double stranded DNA. The 3-hydroxy-N-methylpyrrole/N-methylpyrrole carboxamide pair specifically

recognizes the T.multidot.A base pair, while the N-methylpyrrole/3-hydroxy-N-methylpyrrole pair recognizes A.multidot.T nucleotide pairs. Similarly, an N-methylimidizole/N-methylpyrrole carboxamide pair specifically recognizes the G.multidot.C nucleotide pair, and the N-methylpyrrole/N-methylimidizole carboxamide pair recognizes the C.multidot.G nucleotide pair.

L62 ANSWER 17 OF 24 USPATFULL on STN
AN 2002:243068 USPATFULL
TI Molecular **labeling** and assay systems using poly (amino acid)-metal ion complexes as linkers
IN Twu, Jesse J., Cupertino, CA, UNITED STATES
PI US 2002132254 A1 20020919
AI US 2001-172 A1 20011130 (10)
PRAI US 2000-250681P 20001130 (60)
DT Utility
FS APPLICATION
LREP KOLISCH HARTWELL DICKINSON MCCORMACK &, HEUSER, 520 S.W. YAMHILL STREET, SUITE 200, PORTLAND, OR, 97204
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1092
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Systems, including compositions and methods, for purifying and/or **labeling** proteins or other molecules of interest and/or for assaying the conformational and/or binding states of such molecules. The compositions may include products having the formula

T-P-M-L

where T is a species, M is a metal ion, P is a peptide or protein that binds the metal ion, and L is a luminescent **label**. The methods may include purifying and/or **labeling** a molecule of interest, detecting luminescence energy transfer, detecting dissociation and/or association of a molecule or molecules of interest, detecting a conformational change in a molecule of interest, and detecting an analyte, among others.

L62 ANSWER 18 OF 24 USPATFULL on STN
AN 2002:126287 USPATFULL
TI Proteomic analysis
IN Cravatt, Benjamin F., La Jolla, CA, UNITED STATES
Sorensen, Erik, San Diego, CA, UNITED STATES
Patricelli, Matthew P., San Diego, CA, UNITED STATES
Lovato, Martha, San Diego, CA, UNITED STATES
Adam, Gregory, San Diego, CA, UNITED STATES
PA The Scripps Research Institute of an Assignment (U.S. corporation)
PI US 2002064799 A1 20020530
AI US 2001-836145 A1 20010416 (9)
RLI Continuation of Ser. No. US 2000-738271, filed on 15 Dec 2000, PENDING
PRAI US 2000-195954P 20000410 (60)
US 2000-212891P 20000620 (60)
US 2000-222532P 20000802 (60)
DT Utility
FS APPLICATION
LREP Lisa A. Haile, Ph.D., Gray Cary Ware & Freidenrich LLP, Suite 1600, 4365

Executive Drive, San Diego, CA, 92121-2189
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 3602
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods for analyzing proteomes, as cells or lysates. The analysis is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compound libraries that are used for the identification of lead molecules, and for the parallel identification of their biological targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compounds, referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biological activities or target proteins.

L62 ANSWER 19 OF 24 USPATFULL on STN
AN 2002:85189 USPATFULL
TI Human voltage gated sodium channel beta1A subunit and methods of use
IN Qin, Ning, Blue Bell, PA, UNITED STATES
Codd, Ellen, Blue Bell, PA, UNITED STATES
D'Andrea, Michael, Cherry Hill, NJ, UNITED STATES
PI US 2002045229 A1 20020418
AI US 2001-875456 A1 20010606 (9)
PRAI US 2000-294405P 20000607 (60)
DT Utility
FS APPLICATION
LREP AUDLEY A. CIAMPORCERO JR., JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 2944
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB DNAs encoding human voltage-gated sodium channel .beta.1A subunit have been cloned and characterized. The recombinant protein is capable of forming biologically active protein. The cDNA's have been expressed in recombinant host cells that produce active recombinant protein. The recombinant protein is also purified from the recombinant host cells. In addition, the recombinant host cells are utilized to establish a method for identifying modulators of the receptor activity, and receptor modulators are identified.

L62 ANSWER 20 OF 24 USPATFULL on STN
AN 2002:85154 USPATFULL
TI Proteomic analysis
IN Cravatt, Benjamin F., La Jolla, CA, UNITED STATES
Sorensen, Erik, San Diego, CA, UNITED STATES
Patricelli, Matthew P., San Diego, CA, UNITED STATES
Lovato, Martha, San Diego, CA, UNITED STATES
Adam, Gregory, San Diego, CA, UNITED STATES
PI US 2002045194 A1 20020418
AI US 2000-738954 A1 20001215 (9)

PRAI US 2000-195954P 20000410 (60)
US 2000-212891P 20000620 (60)
US 2000-222532P 20000802 (60)
DT Utility
FS APPLICATION
LREP Lisa A. Haile, Ph.D., Gray Cary Ware & Freidenrich LLP, Suite 1600, 4365 Executive Drive, San Diego, CA, 92121-2189
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 3728
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods for analyzing proteomes, as cells or lysates. The analysis is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compound libraries that are used for the identification of lead molecules, and for the parallel identification of their biological targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compounds, referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biological activities or target proteins.

L62 ANSWER 21 OF 24 USPATFULL on STN
AN 2001:178816 USPATFULL
TI Complex formation between dsDNA and oligomer of cyclic heterocycles
IN Dervan, Peter B., San Marino, CA, United States
Gottesfeld, Joel M., Del Mar, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
PI US 6303312 B1 20011016
AI US 1999-434290 19991105 (9)
RLI Continuation of Ser. No. US 1997-853525, filed on 8 May 1997, now patented, Pat. No. US 5998140 Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997 Continuation-in-part of Ser. No. US 607078
PRAI US 1996-23309P 19960731 (60)
US 1996-24374P 19960801 (60)
US 1996-26713P 19960925 (60)
US 1997-38384P 19970214 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Houtteman, Scott W.
LREP Morrison & Foerster LLP
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 2156
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for forming complexes intracellularly between dsDNA and oligomers of heterocycles, aliphatic amino acids, particularly omega-amino acids, and a polar end group. By

appropriate choice of target sequences and composition of the oligomers, complexes are obtained with low dissociation constants. The formation of complexes can be used for modifying the phenotype of cells, either prokaryotic or eukaryotic, for research and therapy.

L62 ANSWER 22 OF 24 USPATFULL on STN
AN 2001:32756 USPATFULL
TI Photoluminescent sensors of chemical analytes
IN Thompson, Richard B., Baltimore, MD, United States
Feliccia, Vincent L., Arnold, MD, United States
Maliwal, Badri P., Baltimore, MD, United States
Fierke, Carol A., Durham, NC, United States
PA University of Maryland, Baltimore, Baltimore, MD, United States (U.S. corporation)
PI US 6197258 B1 20010306
AI US 1999-273303 19990319 (9)
RLI Continuation-in-part of Ser. No. US 1998-71351, filed on 30 Apr 1998
Continuation-in-part of Ser. No. US 1996-736904, filed on 25 Oct 1996, now patented, Pat. No. US 5952236, issued on 14 Sep 1999
PRAI US 1998-78597P 19980319 (60)
US 1998-83868P 19980501 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Soderquist, Arlen
LREP Smith, Chalin A., Marks, David L.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 46 Drawing Figure(s); 44 Drawing Page(s)
LN.CNT 1830
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention described in detail herein relates to the detection, determination, and quantitation of certain ions and small molecules in solution. The invention specifically relates to improvements in the area of photoluminescent sensors for use in a detection scheme involving the alteration of a photoluminescent **label** or moiety attached to or associated with an analyte binding macromolecule. One may use the changes in photoluminescence lifetime, changes in ratios of photoluminescence intensity or changes in photoluminescence polarization (anisotropy) to determine the analyte. The photoluminescence change measured correlates to the concentration of the ion or molecule in solution.

L62 ANSWER 23 OF 24 USPATFULL on STN
AN 2000:150318 USPATFULL
TI Complex formation between dsDNA and pyrrole imidazole polyamides
IN Dervan, Peter B., San Marino, CA, United States
PA Genesoft, Inc., South San Francisco, CA, United States (U.S. corporation)
PI US 6143901 20001107
AI US 1997-837524 19970421 (8)
RLI Continuation-in-part of Ser. No. US 607708
PRAI US 1996-23309P 19960731 (60)
US 1996-24374P 19960801 (60)
US 1996-26713P 19960925 (60)
US 1997-38384P 19970214 (60)
DT Utility
FS Granted

EXNAM Primary Examiner: Higel, Floyd D.
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2668
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for forming complexes between dsDNA and oligomers of heterocycles, aliphatic amino acids, particularly omega-amino acids, and a polar end group. By appropriate choice of target sequences and composition of the oligomers, complexes are obtained with low dissociation constants. The formation of complexes can be used for identification of specific dsDNA sequences, for inhibiting gene transcription, and as a therapeutic for inhibiting proliferation of undesired cells or expression of undesired genes.

L62 ANSWER 24 OF 24 USPATFULL on STN
AN 1999:159756 USPATFULL
TI Complex formation between dsDNA and oligomer of cyclic heterocycles
IN Dervan, Peter B., San Marino, CA, United States
Gottesfeld, Joel M., Del Mar, CA, United States
PA The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 5998140 19991207
AI US 1997-853525 19970508 (8)
RLI Continuation-in-part of Ser. No. US 1997-837524, filed on 21 Apr 1997 which is a continuation-in-part of Ser. No. US 607078
PRAI US 1996-23309P 19960731 (60)
US 1996-24374P 19960801 (60)
US 1996-26713P 19960925 (60)
US 1997-38384P 19970214 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Houtteman, Scott W.
LREP Morrison & Foerster, LLP
CLMN Number of Claims: 53
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 2385
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for forming complexes intracellularly between dsDNA and oligomers of heterocycles, aliphatic amino acids, particularly omega-amino acids, and a polar end group. By appropriate choice of target sequences and composition of the oligomers, complexes are obtained with low dissociation constants. The formation of complexes can be used for modifying the phenotype of cells, either prokaryotic or eukaryotic, for research and therapy.

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=> d que
L47        3975 SEA FILE=WPIX ABB=ON  PLU=ON  HISTIDINE OR POLYHISTIDINE
L48      173850 SEA FILE=WPIX ABB=ON  PLU=ON  NI OR NICKEL
L49        4834 SEA FILE=WPIX ABB=ON  PLU=ON  LUMINOPHOR? OR FLUOROPHOR? OR
                XANTHEN? ORE FLUORESCEIN OR ROSAMINE OR RHODAMINE OR RHODOL OR
                CASCADE BLUE OR BENZOBODIP? OR TEXAS RED
L51           4 SEA FILE=WPIX ABB=ON  PLU=ON  L47 AND L48 AND L49


=> d bib abs 1-4

L51  ANSWER 1 OF 4  WPIX  COPYRIGHT 2004 THOMSON DERWENT on STN
AN   2002-599564 [64]   WPIX
DNC  C2002-169388
TI   New aminoacid derivatives, useful for labeling, oligomerizing or
     immobilizing proteins, comprise covalently bonded metal chelating agent
     for coordinative interaction with an aminoacid.
DC   B04 B05
IN   TAMPE, R
PA   (TAMP-I) TAMPE R
CYC  100
PI   WO 2002051794 A2 20020704 (200264)* DE   55p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
            RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
            ZW
     DE 10064896   A1 20020711 (200264)
ADT  WO 2002051794 A2 WO 2001-EP15210 20011221; DE 10064896 A1 DE 2000-10064896
     20001223
PRAI DE 2000-10064896 20001223
AN   2002-599564 [64]   WPIX
AB   WO 200251794 A UPAB: 20021007
     NOVELTY - Aminoacid derivatives (I), comprising a covalently bonded metal
     chelating agent (II) suitable for coordinative interaction with an
     aminoacid (specifically histidine), are new.
          DETAILED DESCRIPTION - Aminoacid derivatives of formula (I),
     comprising a covalently bonded metal chelating agent (II) suitable for
     coordinative interaction with an aminoacid (specifically histidine
     ), and their amino-and/or carboxy-protected derivatives are new.
     n, m  = 0-5; and
     R  = side-chain.
          INDEPENDENT CLAIMS are included for:
          (1) Polypeptides (A) containing (I); and
          (2) Protein complexes (B), comprising:
          (i) a polypeptide (A);
          (ii) at least one cation complexed with (I); and
          (iii) a second polypeptide containing at least one histidine

          USE - Use of (A) is claimed for labeling proteins (specifically
     intracellular proteins), dimerization and/or oligomerization of proteins
     (specifically where (A) is covalently bonded to a cysteine residue in the
     protein to be dimerized or oligomerized) or for controlled immobilization
     of proteins on surfaces (specifically for structured assembly of proteins
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on surfaces using screen probe microscopic techniques).

More generally residues of the aminoacids (I) act as connectable biochemical pincers and synthetic receptors for molecular organization and manipulation of biomolecules. Typical applications are in nano-biotechnology, functional protein analysis, protein chips, biosensors, high throughput screening, drug screening, functional surface layers and protein assays.

ADVANTAGE - (A) interacts with the binding partners specifically and with high affinity, and allows reliable and predictable elution. Dwg.0/14

L51 ANSWER 2 OF 4 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-154968 [20] WPIX
DNN N2002-117782 DNC C2002-048538
TI Identifying substances for use as P2Y receptor agonists or antagonists, comprises contacting the receptor with a test substance in a cell-free system and measuring the interaction or effect of the substance on a sample.
DC B04 D16 S03
IN BLAESIUS, R; HARDEN, T K; NICHOLAS, R; WALDO, G L; BALESIUS, R
PA (UYNC-N) UNIV NORTH CAROLINA; (BLAE-I) BLAESIUS R; (HARD-I) HARDEN T K; (NICH-I) NICHOLAS R; (WALD-I) WALDO G L
CYC 96
PI WO 2002004955 A2 20020117 (200220)* EN 50p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001073243 A 20020121 (200234)
EP 1301792 A2 20030416 (200328) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 2003175810 A1 20030918 (200362)
NZ 523523 A 20031031 (200380)
ADT WO 2002004955 A2 WO 2001-US21467 20010706; AU 2001073243 A AU 2001-73243 20010706; EP 1301792 A2 EP 2001-952501 20010706, WO 2001-US21467 20010706; US 2003175810 A1 Provisional US 2000-216618P 20000707, Cont of WO 2001-US21467 20010706, US 2003-336608 20030103; NZ 523523 A NZ 2001-523523 20010706, WO 2001-US21467 20010706
FDT AU 2001073243 A Based on WO 2002004955; EP 1301792 A2 Based on WO 2002004955; NZ 523523 A Based on WO 2002004955
PRAI US 2000-216618P 20000707; US 2003-336608 20030103
AN 2002-154968 [20] WPIX
AB WO 200204955 A UPAB: 20020402
NOVELTY - Screening (M1) candidate substances (CS) for an ability to modulate P2Y receptor-promoted biological activity, by:

(a) contacting a test sample comprising a pure P2Y receptor, with candidate substances; and

(b) measuring an interaction, effect or their combination, of the substances on test sample, to determine ability of the substance to modulate P2Y receptor-promoted biological activity.

DETAILED DESCRIPTION - Screening (M1) candidate substances (CS) for an ability to modulate P2Y receptor-promoted biological activity, by:

(a) contacting a test sample comprising a pure P2Y receptor, with candidate substances; and

(b) measuring an interaction, effect or their combination, of the substances on test sample, to determine ability of the substance to modulate P2Y receptor-promoted biological activity.

In an alternative method, M1 comprises:

(a) establishing replicate test and control samples that comprise a pure biologically active P2Y receptor (G protein coupled receptor for extracellular nucleotides that have been shown to be functional receptors) polypeptide, administering a candidate substance to the test sample but not the control sample, measuring the activity of P2Y receptor-promoted biological activity in the test and control samples, and determining that the candidate substance modulates P2Y receptor-promoted biological activity if a level of P2Y receptor-promoted activity measured for the test sample is greater or less than the level of P2Y receptor-promoted biological activity measured for the control sample; or

(b) establishing a control system comprising a ligand and a P2Y receptor capable of binding to the ligand, establishing a test system comprising a P2Y receptor, a ligand and a candidate compound, measuring binding affinity of a P2Y receptor and a ligand in the control and the test systems, and determining that the candidate compound modulates P2Y receptor-promoted activity in a cell-free system if the binding affinity measured for the test system is less than or greater than the binding affinity measured for the control system.

INDEPENDENT CLAIMS are also included for the following:

(1) a cell-free system for the study of P2Y receptors, comprising a P2Y receptor, a vesicle, and optionally a protein that normally interacts with the P2Y receptor in nature; and

(2) producing (M2) a cell-free system for the assay of P2Y receptor-promoted activity, by:

(a) purifying a P2Y receptor;

(b) purifying a protein that normally interacts with the P2Y receptor in nature;

(c) reconstituting the P2Y receptor into a vesicle; and

(d) optionally reconstituting the protein into the vesicle to produce the cell-free system.

USE - M1 is useful for screening candidate substances for the ability to modulate P2Y receptor-promoted biological activity including hydrolysis of NTP molecules to NDP molecules, formation of NTP molecules from NDP molecules, modulation of intracellular calcium levels, modulation of phospholipase C activity, modulation of adenylate cyclase activity, translocation of RhoA (a small GTP-binding protein that controls reorganization of the actin cytoskeleton and activates transcription factors in response to extracellular agonists) to membranes, formation of a network of stress fibers, phosphorylation of myosin light chains, cell differentiation modulation of NTPase activity, shape change in platelets and their combinations. M2 is useful for producing a cell-free system for the assay of P2Y receptor-promoted activity (claimed).

ADVANTAGE - The cell-free system eliminates contaminating protein and non-specific binding. The elimination of contaminants enhances the signal to noise ratio of the assay. Thus, due to low degree of background signal even weak binding events and low level activities can be accurately detected and quantified.

Dwg.0/5

L51 ANSWER 3 OF 4 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-211359 [21] WPIX
DNN N2001-150986 DNC C2001-062914
TI High-speed nucleic acid sequencing by primer extension, useful e.g. for

diagnosis, uses polymerase and nucleotides that are both labeled with **fluorophores**.

DC B04 D16 S03
IN RUBENS, D; SCHNEIDER, T D
PA (USSH) US DEPT HEALTH & HUMAN SERVICES
CYC 94
PI WO 2001016375 A2 20010308 (200121)* EN 40p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000070868 A 20010326 (200137)
ADT WO 2001016375 A2 WO 2000-US23736 20000829; AU 2000070868 A AU 2000-70868 20000829
FDT AU 2000070868 A Based on WO 2001016375
PRAI US 1999-151580P 19990830
AN 2001-211359 [21] WPIX
AB WO 200116375 A UPAB: 20010418
NOVELTY - Sequencing a nucleic acid (I) by treatment with an oligonucleotide probe (OP), polymerase (P) and a mixture of nucleotides (NTP), with NTP and P each labeled with **fluorophores** that generate a signal characteristic of a particular NTP as this is incorporated into the complement of (I) being formed. This signal is detected as NTP is incorporated.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a substrate to which a GFP-polymerase (GFP = green fluorescent protein) is attached; and

(b) device for sequencing (I) comprising a substrate to which P (labeled with a donor **fluorophore**), OP and (I) are attached; system for viewing P; system for detecting a signal from an acceptor **fluorophore** carried by an NTP, as this is incorporated into the complementary strand being formed; source of light that excites the donor, but not the acceptor, and a decoder for converting a sequence of signals into a nucleic acid sequence.

USE - The method is used to sequence (I) for research or diagnostic purposes.

ADVANTAGE - This method does not require electrophoresis or complex pumping systems; does not result in shearing of (I) and is suitable for automated sequencing of many (e.g. 1000) (I) simultaneously, allowing sequencing speeds as high as 360 bases /hr.

DESCRIPTION OF DRAWING(S) - Diagram of a system where the polymerase is attached to a support.

Polymerase 10
Support 12
Linker 14
Nucleic acid being sequenced 16
Primer 18
Nucleotides 20
fluorophore 22
Dwg.1A/3

L51 ANSWER 4 OF 4 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-302953 [26] WPIX
DNN N2000-226397 DNC C2000-091754

TI New particulate label comprising two signal generating moieties bound to a particulate support, useful for homogenous assays for analyte concentration and for assessing component reactivity.
DC B04 D16 S03
IN KAUVAR, L M; SEDAT, J
PA (TREL-N) TRELLIS BIOINFORMATICS INC; (KAUV-I) KAUVAR L M; (SEDA-I) SEDAT J; (TREL-N) TRELLIS BIOSCIENCE INC
CYC 24
PI WO 2000014545 A1 20000316 (200026)* EN 37p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA IL JP
AU 9957908 A 20000327 (200032)
EP 1110090 A1 20010627 (200137) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 2001031464 A1 20011018 (200166)
US 2001044116 A1 20011122 (200176)
JP 2002524739 W 20020806 (200266) 42p
US 6492125 B2 20021210 (200301)
US 6642062 B2 20031104 (200374)
ADT WO 2000014545 A1 WO 1999-US19708 19990830; AU 9957908 A AU 1999-57908 19990830; EP 1110090 A1 EP 1999-945277 19990830, WO 1999-US19708 19990830; US 2001031464 A1 US 1998-146984 19980903; US 2001044116 A1 CIP of US 1998-146984 19980903, US 1999-332613 19990614; JP 2002524739 W WO 1999-US19708 19990830, JP 2000-569238 19990830; US 6492125 B2 CIP of US 1998-146984 19980903, US 1999-332613 19990614; US 6642062 B2 US 1998-146984 19980903
FDT AU 9957908 A Based on WO 2000014545; EP 1110090 A1 Based on WO 2000014545; JP 2002524739 W Based on WO 2000014545
PRAI US 1999-332613 19990614; US 1998-146984 19980903
AN 2000-302953 [26] WPIX
AB WO 200014545 A UPAB: 20000531
NOVELTY - A particulate label (I) is new and comprises a particulate support to which is bound at least two signal generating moieties in a predetermined amount and ratio which in situ generates a signal different from that generated by the other(s) and where the signals can be varied over a series of graduations.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a collection of (I) comprising multiplicities of (I) having different ratios and/or amounts of the signal-generating moieties so each label has a different hue;

(2) a method for assessing a sample for its constituent components comprising contacting the sample with the collection of (I) and determining which labels are bound and which labels are not bound by the sample;

(3) a system for the detection of an interaction between a multiplicity of reagents and at least one target which system comprises the collection of (I) with a detection means for each different wavelength band of color generating moiety;

(4) a method to follow the course of a network of physiological pathways comprising contacting a series of end points of the pathways with the matrix and observing the progress of the labels from each position in the matrix; and

(5) a method for assessing the interaction of a first library of com pounds with a second library containing potentially compounds which are opposite members of specific binding pairs with compounds contained in the first library comprising providing coupled members of the first library to

(I) so that each member of the library is coupled to a label with a signal different from the other members of the library, providing coupled members of the second library to (I) so that each member of the second library is coupled to a label with a signal different from the other members of the library; where the labels in the first library are substantially larger in size than the labels of the second library, contacting the first labelled library with the second labelled library and observing the formation of rosettes.

USE - The particulate label (I) is useful for assays where multiple reactivities need to be observed. (I) is also useful in a system for assessing the reactivity of a sample with a multiplicity of reagents coupled to labels and collections of (I) are useful for labels in library versus library screening. (I) of different sizes can be used as a basis for homogenous assays for analyte concentration in a competitive binding format or for affinity titrations by displacement of unlabeled analyte from larger particulates by competition from analyte analogs coupled to labelled smaller beads. (I) is also useful in methods for assessing the reactivity of components in a sample using the assay system. The nature of the reagent depends on the nature of the application, e.g. antibodies are useful in tissue typing and other diagnostic assays, peptide generated from cDNA libraries are useful in assessing receptor binding, oligonucleotides are useful in assays based on complementary chain hybridization.

ADVANTAGE - It is possible to locate the position of any specific particulate or group of particulates within the sample. Also if each label is coupled to a different reagent then the collection of (I) can be used to run multiple assays at once as each particle can be identified by the hue of light that it generates.

Dwg.0/7

```
=> d que l45
L1             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  HISTIDINE/CN
L2             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  POLYHISTIDINE/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  NICKEL/CN
L4             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (ROSAMINE/CN OR "ROSAMINE
                 (ALKALOID)"/CN OR "ROSAMINE (DYE)"/CN OR "ROSAMINE 1"/CN OR
                 "ROSAMINE 5"/CN OR "ROSAMINE 6"/CN OR "ROSAMINE, TETRADEMETHYLT
                 ETRAETHYL-"/CN)
L5             3 SEA FILE=REGISTRY ABB=ON  PLU=ON  (RHODOL/CN OR "RHODOL
                 (FLUORAN DERIVATIVE)"/CN OR "RHODOL GREEN"/CN)
L6             9 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("CASCADE BLUE"/CN OR
                 "CASCADE BLUE ACETYL AZIDE"/CN OR "CASCADE BLUE CADAVERINE"/CN
                 OR "CASCADE BLUE ETHYLENEDIAMINE TRISODIUM SALT"/CN OR
                 "CASCADE BLUE HYDRAZIDE"/CN OR "CASCADE BLUE HYDRAZIDE
                 TRIPOTASSIUM SALT"/CN OR "CASCADE BLUE HYDRAZIDE TRISODIUM
                 SALT"/CN OR "CASCADE BLUE-7-UTP"/CN)
L7             8 SEA FILE=REGISTRY ABB=ON  PLU=ON  TEXAS RED?/CN
L8         33027 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L-HISTIDINE/CT
L9         33760 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR L2 OR L8
L10       290800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  NICKEL/CT
L11       775862 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR L10 OR NI OR NICKEL
L12         4330 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLUORESCENT BRIGHTENERS+OLD/CT

L13        45579 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LUMINESCENT SUBSTANCES+OLD,NT/
                 CT
L14        20694 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PHOSPHORS+NT/CT
L15        47353 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LUMINOPHOR? OR L12 OR L13 OR
                 L14
L16         8030 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLUOROPHOR?
L17         4513 SEA FILE=HCAPLUS ABB=ON  PLU=ON  XANTHENE
L18         6929 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLUORESCEIN+NT/CT
L19        23090 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 OR FLUORESCEIN
L20           75 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR ROSAMINE
L21        10519 SEA FILE=HCAPLUS ABB=ON  PLU=ON  RHODAMINE/OBI
L22          668 SEA FILE=HCAPLUS ABB=ON  PLU=ON  RHODOL/OBI OR L5
L23          170 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR CASCADE BLUE/OBI
L26          605 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 OR TEXAS RED/OBI
L27        88005 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 OR L16 OR L17 OR L19 OR
                 L20 OR L21 OR L22 OR L23 OR L26
L37            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "NICKEL ION(2+)"/CN
L41       776809 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 OR L11
L43           21 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9 AND L41 AND L27
L44           16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 AND PROTEIN/OBI
L45           21 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 OR L44


=> d l45 ibib ab hitind hitstr 1-21

L45  ANSWER 1 OF 21  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:875484  HCAPLUS
DOCUMENT NUMBER:          139:361233
TITLE:                    Bis-transition-metal-chelate-probes
INVENTOR(S):              Ebright, Richard H.; Ebright, Yon W.
PATENT ASSIGNEE(S):       Rutgers, the State of University of New Jersey, USA
SOURCE:                   PCT Int. Appl., 80 pp.
                          CODEN: PIXXD2
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DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003091689	A2	20031106	WO 2002-US36180	20021112

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-367775P P 20020328
US 2002-410267P P 20020913

OTHER SOURCE(S): MARPAT 139:361233

AB A probe for labeling a target material is provided including two transition-metal chelates and detectable group. The probe has the general structural formula (I) wherein: (a) Y and Y' are each a transition metal, (b) R1 and R1 are each independently CH(COO-), CH(COOH), or absent; (c)R2 and R2 are linkers each having a length of from about 3.0 to about 20 A; and (d) X is a detectable group. The linkers may be linear or branched, may contain arom. moieties, and may optionally be further substituted. Methods of use of the probe in detecting and analyzing target materials of interest also are provided.

IC ICM G01N
CC 9-16 (Biochemical Methods)
IT **Proteins**
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(-**protein** binding; bis-transition-metal-chelate-probes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CAP (catabolite gene activator **protein**), hexahistidine tagged; bis-transition-metal-chelate-probes)
IT Self-association
(**Protein**; bis-transition-metal-chelate-probes)
IT Affinity
Alkyl groups
Animal tissue
Aryl groups
Biological materials
Capillary tubes
Carboxyl group
Cell
Chelating agents
Chemical formula
Chromophores
Concentration (condition)
Conformational transition
Coupling reaction

Crosslinking agents
Cuvettes
Cyanine dyes
Fluorescence
Fluorescence quenching
Fluorescence resonance energy transfer
Fluorescent dyes
Fluorescent substances
Gels
Immobilization, molecular or cellular
Isotope indicators
Labels
Length
Linking agents
Luminescent substances
Materials
Membrane, biological
Methyl group
Microtiter plates
Molecules
NMR spectroscopy
Optical absorption
Organ, animal
Phosphorescent substances
Protein sequences
Reaction
Solids
Solutions
Spin labels
Surface
Synthesis
Synthons
Tautomers
Test kits
Test tubes
Washing
(bis-transition-metal-chelate-probes)

IT Peptides, analysis
Proteins
Transition metal compounds
RL: ANT (Analyte); ANST (Analytical study)
(bis-transition-metal-chelate-probes)

IT **71-00-1D**, Histidine, compds. contg. 64134-30-1
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(bis-transition-metal-chelate-probes)

IT 64-19-7D, Acetic acid, probes contg., uses 7704-34-9D, Sulfur, probes contg. 7782-44-7D, Oxygen, probes contg. **14701-22-5D**, probes contg., uses 15158-11-9D, probes contg., uses 22541-53-3D, probes contg., uses 23713-49-7D, Zincion, probes contg., uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition-metal-chelate-probes)

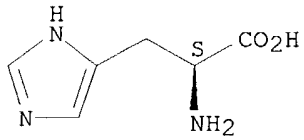
IT 50-00-0, Formaldehyde, reactions 90-47-1, Xanthenone 92-83-1, **Xanthene** 95-21-6, 2-Methylbenzoxazole 109-06-8, 2-Methylpyridine 120-75-2, 2-Methylbenzothiazole 135-67-1, Phenoxazine 1640-39-7, 2,3,3-Trimethylindole 2143-61-5, Propyl 2682-45-3 4808-69-9 6764-43-8 7718-54-9, **Nickel** chloride (NiCl2),

reactions 20686-66-2 21431-16-3 41532-84-7 113995-55-4 129179-17-5 132557-72-3 146368-15-2 146397-20-8 157646-47-4 618886-23-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(bis-transition-metal-chelate-probes)

IT **71-00-1D**, Histidine, compds. contg.
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(bis-transition-metal-chelate-probes)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **14701-22-5D**, probes contg., uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition-metal-chelate-probes)

RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

Ni^{2+}

L45 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:326006 HCAPLUS
DOCUMENT NUMBER: 139:161341
TITLE: A green fluorescent chemosensor for amino acids provides a versatile high-throughput screening (HTS) assay for proteases
AUTHOR(S): Dean, Kathryn E. S.; Klein, Gerard; Renaudet, Olivier; Reymond, Jean-Louis
CORPORATE SOURCE: Department of Chemistry & Biochemistry, University of Bern, Bern, 3012, Switz.
SOURCE: Bioorganic & Medicinal Chemistry Letters (2003), 13(10), 1653-1656
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The water sol. **fluorescein**-based ligand 1 forms a non-fluorescent complex with Cu2+. This complex serves as a fluorescent sensor for amino acids in the 10-3 M concn. range. Since the signal response is very fast, the sensor can be used to detect the hydrolytic activity of various proteases (trypsin, chymotrypsin, subtilisin) on bovine serum albumin as a whole protein substrate, and more generally to follow reactions releasing or removing free amino acids, in real time.

CC 7-1 (Enzymes)
Section cross-reference(s): 9

IT **Fluorescent indicators**
High throughput screening
(calcein.cntdot.Cu2+ complex for fluorescence detection of free Cu2+-ligating amino acids and peptides and as a versatile high-throughput screening (HTS) assay for proteases)

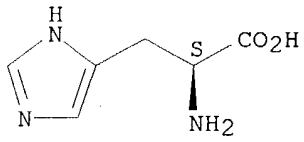
IT 52-90-4, L-Cysteine, analysis 56-40-6, Glycine, analysis 56-41-7, L-Alanine, analysis 56-45-1, L-Serine, analysis 60-00-4, EDTA, analysis 61-90-5, L-Leucine, analysis 63-68-3, L-Methionine, analysis 65-82-7, N-Acetylmethionine **71-00-1**, L-Histidine, analysis 72-18-4, L-Valine, analysis 107-95-9, .beta.-Alanine 9001-73-4, Papain 9001-75-6, Pepsin 9001-92-7, Protease 9002-07-7, Trypsin 9004-06-2, Elastase 9004-07-3, .alpha.-Chymotrypsin 9012-37-7, Acylase I 9014-01-1, Subtilisin 9031-94-1, Aminopeptidase 9073-78-3, Thermolysin 13079-20-4, Leucinamide
RL: ANT (Analyte); ANST (Analytical study)
(calcein.cntdot.Cu2+ complex for fluorescence detection of free Cu2+-ligating amino acids and peptides and as a versatile high-throughput screening (HTS) assay for proteases)

IT **14701-22-5, Nickel**(2+), processes 22541-53-3, Cobalt(2+), processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(quenching of calcein fluorescence; calcein.cntdot.Cu2+ complex for fluorescence detection of free Cu2+-ligating amino acids and peptides and as a versatile high-throughput screening (HTS) assay for proteases)

IT **71-00-1**, L-Histidine, analysis
RL: ANT (Analyte); ANST (Analytical study)
(calcein.cntdot.Cu2+ complex for fluorescence detection of free Cu2+-ligating amino acids and peptides and as a versatile high-throughput screening (HTS) assay for proteases)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **14701-22-5, Nickel**(2+), processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(quenching of calcein fluorescence; calcein.cntdot.Cu2+ complex for fluorescence detection of free Cu2+-ligating amino acids and peptides and as a versatile high-throughput screening (HTS) assay for proteases)

RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

Ni^{2+}

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 3 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:466603 HCAPLUS
DOCUMENT NUMBER: 137:30231
TITLE: Fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays
INVENTOR(S): Nikiforov, Theo T.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S. 6,287,774.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002076697	A1	20020620	US 2000-569193	20000511
US 6472141	B2	20021029		
US 6287774	B1	20010911	US 1999-316447	19990521
CN 1130564	B	20031210	CN 2000-807851	20000511
US 6436646	B1	20020820	US 2000-727532	20001128
US 2002146703	A1	20021010	US 2001-865044	20010524
ZA 2001009192	A	20021107	ZA 2001-9192	20011107
US 2002197619	A1	20021226	US 2002-57812	20020124
US 6689565	B2	20040210		
US 2003175815	A1	20030918	US 2003-397887	20030326
US 2004033531	A1	20040219	US 2003-609012	20030627

PRIORITY APPLN. INFO.:
US 1999-316447 A2 19990521
US 1999-139562P P 19990616
US 1999-156366P P 19990928
US 2000-569193 A1 20000511
US 2000-727532 A1 20001128
US 2001-865044 A1 20010524
US 2002-57812 A1 20020124

AB The invention relates to methods, systems, kits for carrying out a wide variety of different assays that comprise providing a first reagent mixt. which comprises a first reagent having a fluorescent label. A second reagent is introduced into the first reagent mixt. to produce a second reagent mixt., where the second reagent reacts with the first reagent to produce a fluorescently labeled product having a substantially different charge than the first reagent. A polyion is introduced into at least one of the first and second reagent mixts., and the fluorescence polarization in the second reagent mixt. relative to the first reagent mixt. is detd., this fluorescence polarization being indicative of the rate or extent of the reaction. The fluorescence-polarization assays are used for enzyme (e.g., kinase and phosphatase) detn. and nucleic acid detection, in nucleic acid hybridization assay and in detection of single nucleotide substitution.

IC ICM C12Q001-68
ICS C07H021-04
NCL 435006000
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 3, 7
IT Alleles
Capillary tubes

Computer application
Dephosphorylation, biological
Electric charge
Electric field
Fluorescent indicators
Fluorometers
Fluorometry
Nucleic acid hybridization
Phosphate group
Phosphorylation, biological
Polarized fluorescence
Polyelectrolytes
Reaction
Test kits
(fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT Peptide nucleic acids
Peptides, uses
Phosphopeptides
Proteins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT **Proteins**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(metal-binding; fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT **Protein** motifs
(phosphorylation site; fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT **Protein** degradation
(reagent; fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT 14127-61-8, Calcium(2+), uses **14701-22-5, Nickel**(2+), uses 20074-52-6, Iron(3+), uses 23713-49-7, Zinc(2+), uses 24937-47-1, Polyarginine 25104-18-1, Polylysine 25212-18-4, Polyarginine **26062-48-6**, Polyhistidine **26854-81-9**, Polyhistidine 31985-59-8, Poly(Methyl phosphonate) 38000-06-5, Polylysine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

IT **14701-22-5, Nickel**(2+), uses **26062-48-6**, Polyhistidine **26854-81-9**, Polyhistidine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence-polarization assays using polyions and application to enzyme and nucleic acid assays)

RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

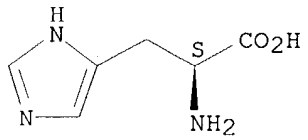
Ni^{2+}

RN 26062-48-6 HCAPLUS
CN L-Histidine, homopolymer (9CI) (CA INDEX NAME)

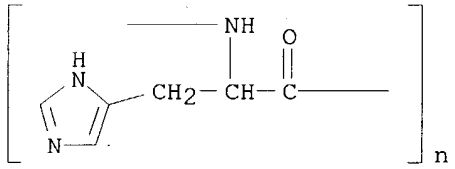
CM 1

CRN 71-00-1
CMF C6 H9 N3 O2

Absolute stereochemistry. Rotation (-).



RN 26854-81-9 HCAPLUS
CN Poly[imino[(1S)-1-(1H-imidazol-4-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



L45 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:462548 HCAPLUS
DOCUMENT NUMBER: 137:30228
TITLE: Use of a poly(amino-acid)-metal ion complex to link a label to a species of interest
INVENTOR(S): Twu, Jesse J.
PATENT ASSIGNEE(S): Molecular Devices Corporation, USA
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1215501	A1	20020619	EP 2001-310076	20011130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002132254	A1	20020919	US 2001-172	20011130

PRIORITY APPLN. INFO.: US 2000-250681P P 20001130

AB Systems, including compns. and methods, for purifying and/or labeling proteins or other mols. of interest and/or for assaying the conformational and/or binding states of such mols. are described. The compns. may include products having the formula T-P-M-L where T is a species, M is a metal ion, P is a peptide or protein that binds the metal ion, and L is a luminescent label. The methods may include purifying and/or labeling a mol. of interest, detecting luminescence energy transfer, detecting dissocn. and/or assocn. of a mol. or mols. of interest, detecting a

conformational change in a mol. of interest, and detecting an analyte, among others.

IC ICM G01N033-58

CC 9-5 (Biochemical Methods)

IT Nucleic acids
Oligonucleotides
Proteins
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(labeled; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Peptides, preparation
Proteins
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(metal ion complexes; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Buffers
Calibration
Conformation
Cyanine dyes
Fluorescent dyes
Fluorescent substances
Luminescent substances
Microtiter plates
Polarized luminescence
Purification
Test kits
(poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Conformation
(**protein**; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **Proteins**
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(purifn. or labeling of; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT Dyes
(**xanthene**; poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **71-00-1**, Histidine, properties
RL: PRP (Properties)
(peptide contg.; poly(amino acid)-metal ion complexes to link labels to species of interest)

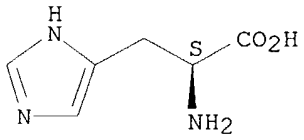
IT 51-17-2D, Benzimidazole, compds., conjugates with metal ion complexes
91-20-3D, Naphthalene, compds., conjugates with metal ion complexes
91-64-5D, Coumarin, compds., conjugates with metal ion complexes
92-81-9D, Carbazine, compds., conjugates with metal ion complexes
120-12-7D, Anthracene, compds., conjugates with metal ion complexes
129-00-0D, Pyrene, compds., conjugates with metal ion complexes
135-67-1D, Phenoxazine, compds., conjugates with metal ion complexes
139-13-9D, Nitrilotriacetic acid, conjugates with fluorescent dye and complexes with metal ion 218-01-9D, Chrysene, compds., conjugates with metal ion complexes 260-94-6D, Acridine, compds., conjugates with metal

ion complexes 588-59-0D, Stilbene, compds., conjugates with metal ion complexes **2321-07-5D, Fluorescein,** compds., conjugates with metal ion complexes **3086-44-0D, Rhodol,** compds., conjugates with metal ion complexes 3546-21-2D, Ethidium, compds., conjugates with metal ion complexes **6837-70-3D, Rosamine** , compds., conjugates with metal ion complexes 13558-31-1D, compds., conjugates with metal ion complexes **14701-22-5D,** complexes with peptide and conjugates with **luminophor,** uses 20074-52-6D, Ferric ion, complexes with phosphopeptide and conjugates with **luminophor,** uses 22537-33-3D, Gallium, ion (Ga3+), complexes with phosphopeptide and conjugates with **luminophor,** uses 22541-18-0D, Eu+3, complexes with poly(amino acid) and conjugates with **luminophor,** uses 22541-20-4D, Terbium, ion (Tb3+), complexes with poly(amino acid) and conjugates with **luminophor,** uses 36015-30-2D, Propidium, compds., conjugates with metal ion complexes 138026-71-8D, Dipyrromethene boron difluoride, compds., conjugates with metal ion complexes 436139-07-0D, compds., conjugates with metal ion complexes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(poly(amino acid)-metal ion complexes to link labels to species of interest)

IT **71-00-1,** Histidine, properties
RL: PRP (Properties)
(peptide contg.; poly(amino acid)-metal ion complexes to link labels to species of interest)

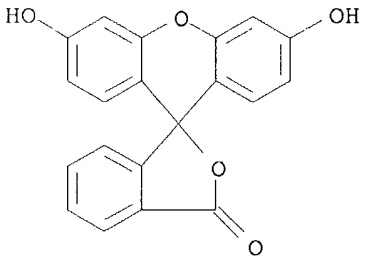
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

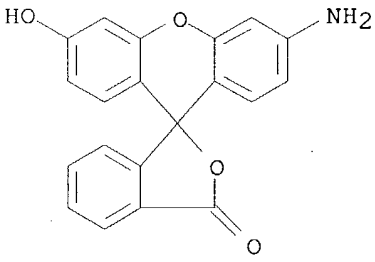


IT **2321-07-5D, Fluorescein,** compds., conjugates with metal ion complexes **3086-44-0D, Rhodol,** compds., conjugates with metal ion complexes **6837-70-3D, Rosamine,** compds., conjugates with metal ion complexes **14701-22-5D,** complexes with peptide and conjugates with **luminophor,** uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(poly(amino acid)-metal ion complexes to link labels to species of interest)

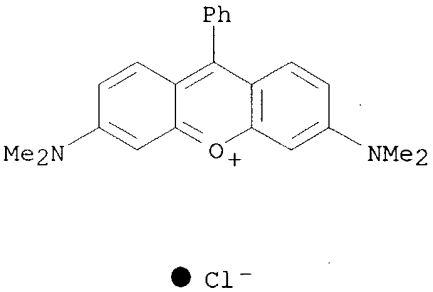
RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 3086-44-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3'-amino-6'-hydroxy- (9CI) (CA INDEX NAME)



RN 6837-70-3 HCAPLUS
CN Xanthylium, 3,6-bis(dimethylamino)-9-phenyl-, chloride (9CI) (CA INDEX NAME)



RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

Ni^{2+}

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:10808 HCAPLUS
DOCUMENT NUMBER: 136:66617

TITLE: Competitive assay method for the determination of receptor binding using antibodies
INVENTOR(S): Meyer-Almes, Franz-Josef
PATENT ASSIGNEE(S): Evotec Analytical Systems G.m.b.H., Germany
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002001226	A1	20020103	WO 2001-EP7424	20010629
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10030798	A1	20020110	DE 2000-10030798	20000629
EP 1295124	A1	20030326	EP 2001-962796	20010629
EP 1295124	B1	20040218		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: DE 2000-10030798 A 20000629
WO 2001-EP7424 W 20010629

AB The invention relates to a competitive assay method, for detg. the binding of mols., with the following method steps: (a) prodn. of a soln. with at least two mol. assocns. (A, B) interacting with each other, each comprising at least two different mols. (A, A; B, B), whereby the binding of at least two mols. in the soln. is affected by a change in the property to be detected, (b) detn. of the at least one property to be detected. The invention further relates to a test method for the detn. of the effect of synthetic or biol. substances on the binding properties of mols. in mol. assocns., comprising the following steps: - prodn. of a soln. with at least two mol. assocns. (A, B) interacting with each other, each comprising at least two different mols. (A, A; B, B), whereby the binding of at least two mols. in the soln. is affected by a change in the property to be detected, addn. of an analyte and detn. of the at least one property to be detected. Thus the binding of 4-hydroxytamoxifen to the estrogen receptor .alpha. (B) was detd. by using 17.beta.-estradiol (B'), antibodies to estradiol (A) and tetra-Me rhodamine-labeled estradiol (A').

IC ICM G01N033-543
ICS G01N033-53; G01N033-542; G01N033-58
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 1, 2
IT Chromophores
Colloids
Drug screening
Drugs
Fluorescent substances
Fluorometry
Immunoassay

Microtiter plates
Molecular association
Radiochemical analysis
(competitive assay method for detn. of receptor binding using antibodies)

IT Antibodies
Carbohydrates, processes
DNA
Hormones, animal, processes
Macromolecular compounds
Neurotransmitters
Peptides, processes
Proteins
RNA
Steroids, processes
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(competitive assay method for detn. of receptor binding using antibodies)

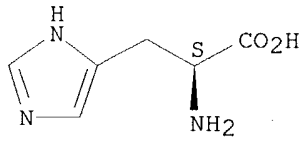
IT 58-85-5, Biotin **71-00-1**, Histidine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(competitive assay method for detn. of receptor binding using antibodies)

IT 1303-33-9, Arsenic sulfide 7440-22-4D, Silver, halides 7440-44-0, Carbon, uses 11113-75-0, **Nickel** sulfide 12653-56-4, Cobalt sulfide
RL: DEV (Device component use); USES (Uses)
(competitive assay method for detn. of receptor binding using antibodies)

IT **71-00-1**, Histidine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(competitive assay method for detn. of receptor binding using antibodies)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:851760 HCAPLUS
DOCUMENT NUMBER: 135:355000
TITLE: Multihued particulate reagent labels
INVENTOR(S): Kauvar, Lawrence M.; Sedat, John
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. Appl. 2001 31,464.
CODEN: USXXCO
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001044116	A1	20011122	US 1999-332613	19990614
US 6492125	B2	20021210		
US 2001031464	A1	20011018	US 1998-146984	19980903
US 6642062	B2	20031104		
CA 2342767	AA	20000316	CA 1999-2342767	19990830
WO 2000014545	A1	20000316	WO 1999-US19708	19990830
W: AU, CA, IL, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9957908	A1	20000327	AU 1999-57908	19990830
EP 1110090	A1	20010627	EP 1999-945277	19990830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002524739	T2	20020806	JP 2000-569238	19990830

PRIORITY APPLN. INFO.: US 1998-146984 A2 19980903
US 1999-332613 A 19990614
WO 1999-US19708 W 19990830

AB Particulate labels that can be individually identified comprise particulate supports to which are bound at least two distinguishable signal-generating moieties, such as **fluorophores** emitting at different wavelengths, which signals are detectable and measurable in situ. By varying the ratio and/or amts. of the signal-generating moieties, a multiplicity of different and distinguishable labels is obtained. Each different label can then be coupled to a different reagent and the individual interactions of each reagent with a target obsd. in parallel.

IC ICM G01N033-53
ICS G01N033-542; G01N033-537; G01N033-543; C07K016-00; G01N033-566; G01N033-531

NCL 435007100

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 80

IT **Fluorescent substances**
(**fluorophores**; multihued particulate reagent labels)

IT **Proteins**, general, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(interactions with library of small mols. sharing same scaffold; multihued particulate reagent labels)

IT Molecules
(small, interactions with **proteins** or receptors; multihued particulate reagent labels)

IT **7440-02-0D, Nickel**, chelates, properties
RL: PRP (Properties)
(and histidine as noncovalent linkage between label and reagent; multihued particulate reagent labels)

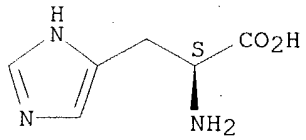
IT **71-00-1**, Histidine, properties
RL: PRP (Properties)
(and **nickel** chelator as noncovalent linkage between label and reagent; multihued particulate reagent labels)

IT **7440-02-0D, Nickel**, chelates, properties
RL: PRP (Properties)
(and histidine as noncovalent linkage between label and reagent; multihued particulate reagent labels)
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

IT **71-00-1**, Histidine, properties
RL: PRP (Properties)
(and **nickel** chelator as noncovalent linkage between label and reagent; multihued particulate reagent labels)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L45 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:338685 HCAPLUS
DOCUMENT NUMBER: 134:350243
TITLE: Microtiter plate based high throughput screening assays for large numbers of cell populations
INVENTOR(S): Pedersen, Henrik; Lamsa, Michael; Hansen, Peter Kamp; Frisner, Henrik; Vind, Jesper; Ernst, Steffen; Kongsbak, Lars; Joergensen, Birthe Ravn; Beck, Thomas Christian; Husum, Tommy Lykke; Von Ossowski, Ingemar
PATENT ASSIGNEE(S): Novozymes A/S, Den.
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032844	A1	20010510	WO 2000-DK568	20001010

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1230348 A1 20020814 EP 2000-965865 20001010
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL
PRIORITY APPLN. INFO.: DK 1999-1605 A 19991105
WO 2000-DK568 W 20001010

AB The present invention is to provide a method to perform assays that efficiently and accurately can screen large nos. of cell populations producing variants of a mol. of interest. In a first aspect the invention relates to a method for high throughput screening (HTS) of a large population of host cells for prodn. of a mol. of interest, the method comprising the steps of: (a) arranging the host cells in a spatial array so each position in the spatial array is occupied by one cell, (b) cultivating the host cells under growth conditions suitable for HTS, (c) assaying each array position for prodn. of the mol. of interest, and (d) selecting the cells from those positions where the mol. was produced, as detd. in step (c).

IC ICM C12N009-00
ICS C12M001-18

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 7

IT Antimicrobial agents
Aspergillus
Bacillus (bacterium genus)
Biochemical molecules
Ceramics
Cytolysis
Drug screening
Drugs
Fermentation
Filamentous fungi
Fluorescence
Fluorescent probes
Genetic vectors
Genomic library
Immobilization, biochemical
Isomerization
Luminescence
Microtiter plates
Molecular cloning
NMR (nuclear magnetic resonance)
Optical absorption
Polarized fluorescence
Proliferation inhibition
Radioactivity
Textiles
(microtiter plate based high throughput screening assays for large nos. of cell populations)

IT Enzymes, analysis
Lipopeptides
Peptides, analysis
Proteins, general, analysis
Transgene
RL: ANT (Analyte); ANST (Analytical study)
(microtiter plate based high throughput screening assays for large nos. of cell populations)

IT Fusion **proteins** (chimeric **proteins**)
RL: ANT (Analyte); BPN (Biosynthetic preparation); ANST (Analytical

study); BIOL (Biological study); PREP (Preparation)
(polyhistidine tagged; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT Secretion (process)
(**protein**; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT 3326-32-7, **Fluorescein** 5-isothiocyanate 51306-35-5, DTAF
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent label; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT **7440-02-0, Nickel,** analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**nickel**-charged nitriloacetic acid agarose; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT 139-13-9D, reaction products with agarose
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**nickel**-charged; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT **26062-48-6,** Polyhistidine **26854-81-9,** Polyhistidine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(tag; microtiter plate based high throughput screening assays for large nos. of cell populations)

IT **7440-02-0, Nickel,** analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**nickel**-charged nitriloacetic acid agarose; microtiter plate based high throughput screening assays for large nos. of cell populations)

RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

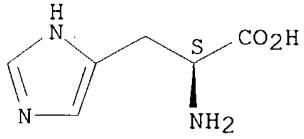
IT **26062-48-6,** Polyhistidine **26854-81-9,** Polyhistidine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(tag; microtiter plate based high throughput screening assays for large nos. of cell populations)

RN 26062-48-6 HCAPLUS
CN L-Histidine, homopolymer (9CI) (CA INDEX NAME)

CM 1

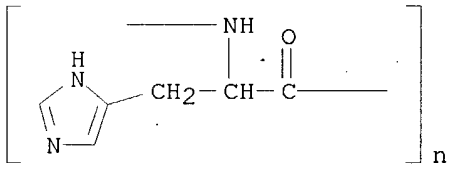
CRN 71-00-1
CMF C6 H9 N3 O2

Absolute stereochemistry. Rotation (-).



RN 26854-81-9 HCAPLUS

CN Poly[imino[(1S)-1-(1H-imidazol-4-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 8 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:168190 HCAPLUS
DOCUMENT NUMBER: 134:217980
TITLE: High speed parallel molecular nucleic acid sequencing
INVENTOR(S): Schneider, Thomas D.; Rubens, Denise
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016375	A2	20010308	WO 2000-US23736	20000829
WO 2001016375	A3	20011004		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000070868	A5	20010326	AU 2000-70868	20000829

PRIORITY APPLN. INFO.: US 1999-151580P P 19990830
WO 2000-US23736 W 20000829

AB A method and device is disclosed for high speed, automated sequencing of nucleic acid mols. A nucleic acid mol. to be sequenced is exposed to a polymerase in the presence of nucleotides which are to be incorporated into a complementary nucleic acid strand. The polymerase carries a donor **fluorophore**, and each type of nucleotide (e.g. A, T/U, C and G) carries a distinguishable acceptor **fluorophore** characteristic of the particular type of nucleotide. As the polymerase incorporates individual nucleic acid mols. into a complementary strand, a laser continuously irradiates the donor **fluorophore**, at a wavelength that causes it to emit an emission signal (but the laser wavelength does not stimulate the acceptor **fluorophore**). In particular embodiments, no laser is needed if the donor **fluorophore** is a luminescent mol. or is stimulated by one. The emission signal from the

polymerase is capable of stimulating any of the donor **fluorophores** (but not acceptor **fluorophores**), so that as a nucleotide is added by the polymerase, the acceptor **fluorophore** emits a signal assocd. with the type of nucleotide added to the complementary strand. The series of emission signals from the acceptor **fluorophores** is detected, and correlated with a sequence of nucleotides that correspond to the sequence of emission signals.

IC ICM C12Q001-68
ICS G01N021-64

CC 3-1 (Biochemical Genetics)

IT **Proteins**, specific or class
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(green fluorescent; high speed parallel mol. nucleic acid sequencing - donor **fluorophores**)

IT Analytical apparatus
CCD cameras
Computer application
DNA sequence analysis
Fluorescent substances
Lasers
Microscopes
RNA sequence analysis
Spectrometers
(high speed parallel mol. nucleic acid sequencing)

IT Aequorins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing - acceptor **fluorophores**)

IT 9012-90-2D, DNA polymerase, **fluorophore** conjugate 9014-24-8D, RNA polymerase, **fluorophore** conjugate 9068-38-6D, Reverse transcriptase, **fluorophore** conjugate 61419-02-1, Naphthofluorescein 70281-37-7, Tetramethylrhodamine **82354-19-6**, **Texas Red**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing)

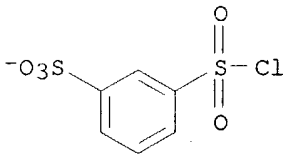
IT **2321-07-5**, **Fluorescein** 138026-71-8, BODIPY 189200-71-3, **Rhodamine** green
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing - acceptor **fluorophores**)

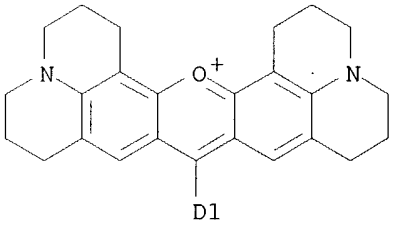
IT 58-85-5D, Biotin, Streptavidin conjugate 70-18-8D, Glutathione, Glutathione S-transferase conjugate **71-00-1D**, Histidine, **nickel** conjugate **7440-02-0D**, **Nickel**, conjugate with histidine, uses 9013-20-1D, Streptavidin, Biotin conjugate 50812-37-8D, Glutathione S-transferase, conjugate with glutathione
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing - donor **fluorophore**-polymerase linker groups)

IT **82354-19-6**, **Texas Red**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing)

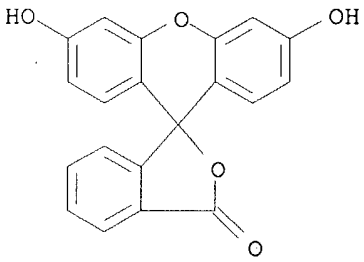
RN 82354-19-6 HCAPLUS

CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2(or 4)-(chlorosulfonyl)-4(or 2)-sulfophenyl]-2,3,6,7,12,13,16,17-octahydro-, inner salt (9CI) (CA INDEX NAME)



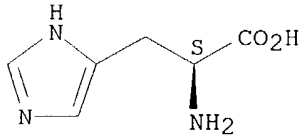


IT **2321-07-5, Fluorescein**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing - acceptor **fluorophores**)
RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)



IT **71-00-1D**, Histidine, **nickel** conjugate **7440-02-0D**
, **Nickel**, conjugate with histidine, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high speed parallel mol. nucleic acid sequencing - donor **fluorophore**-polymerase linker groups)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 7440-02-0 HCAPLUS

CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

L45 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:31675 HCAPLUS
DOCUMENT NUMBER: 134:83111
TITLE: Methods and compositions for assaying analytes
INVENTOR(S): Yuan, Chong-Sheng
PATENT ASSIGNEE(S): General Atomics, USA
SOURCE: PCT Int. Appl., 187 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002600	A2	20010111	WO 2000-US18057	20000630
WO 2001002600	A3	20020110		
WO 2001002600	C2	20020725		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6376210	B1	20020423	US 1999-347878	19990706
GB 2368641	A1	20020508	GB 2002-425	20000630

PRIORITY APPLN. INFO.:
US 1999-347878 A 19990706
US 1999-457205 A 19991206
WO 2000-US18057 W 20000630

AB Compns. and methods for assaying analytes, preferably, small mol. analytes are provided. Assay methods employ, in place of antibodies or mols. that bind to target analytes or substrates, modified enzymes, called substrate trapping enzymes. These modified enzymes retain binding affinity or have enhanced binding affinity for a target substrate or analyte, but have attenuated catalytic activity with respect to that substrate or analyte. The modified enzymes are provided. In particular, mutant S-adenosylhomocysteine (SAH) hydrolases, substantially retaining binding affinity or having enhanced binding affinity for homocysteine or S-adenosylhomocysteine but having attenuated catalytic activity, are provided. Conjugates of the modified enzymes and a facilitating agent, such as agents that aid in purifn. or linkage to a solid support are also provided.

IC ICM C12Q001-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 7
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)

(DNA-binding; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(Fluorescent; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(IgG-binding; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(Polysaccharide binding; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(RNA-binding; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(contractile; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(defense; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(lipid-binding; methods and compns. for assaying analytes)
IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(metal-binding; methods and compns. for assaying analytes)
IT Affinity
Amniotic fluid
Animal cell
Animal tissue
Anions
Artery
Blood analysis
Body fluid
Catalysts
Cell
Cerebrospinal fluid
Composition
Conjugation (molecular association)
Connective tissue
DNA repair
Disease, animal
Drugs
Epithelium
Epitopes
Escherichia coli
Feces
Fluorescent substances
Fungi
Genetic markers
Hydrolysis
Immobilization, biochemical
Infection
Insect (Insecta)
Ions
Lactobacillus casei
Liver
Lymph node

Michaelis constant
Molecules
Mucus
Muscle
Mutation
Neoplasm
Nerve
Organ, animal
Oxidation
Pancreas
Plant cell
Plasmids
Protein sequences
Purification
Recombination, genetic
Saliva
Semen
Sputum
Sulfhydryl group
Tear (ocular fluid)
Test kits
Therapy
Thermoanaerobacterium thermosulfurigenes
Transcription, genetic
Urine analysis
Yeast
(methods and compns. for assaying analytes)

IT Amino acids, analysis
Bile acids
Bile salts
Cardiolipins
Cerebrosides
Fusion **proteins** (chimeric **proteins**)
Gangliosides
Glycerides, analysis
Glycerophospholipids
Hexoses
Inorganic compounds
Lipids, analysis
Monosaccharides
Nucleic acids
Nucleosides, analysis
Nucleotides, analysis
Oligonucleotides
Oligosaccharides, analysis
Organic compounds, analysis
Pentoses
Peptides, analysis
Phosphatidylcholines, analysis
Phosphatidylethanolamines, analysis
Phosphatidylinositols
Phosphatidylserines
Polysaccharides, analysis
Sphingolipids
Sphingomyelins
Sterols
Transport **proteins**

Vitamins
Waxes
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying analytes)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(motile; methods and compns. for assaying analytes)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(nutrient; methods and compns. for assaying analytes)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(regulatory; methods and compns. for assaying analytes)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(storage; methods and compns. for assaying analytes)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(structural; methods and compns. for assaying analytes)

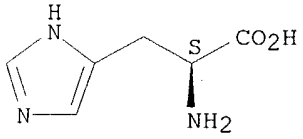
IT 50-69-1, Ribose 50-81-7, Ascorbic acid, analysis 50-89-5, Thymidine, analysis 50-99-7, Glucose, analysis 52-90-4, Cysteine, analysis 53-57-6, Nadph 53-84-9, Nad+ 54-47-7, Pyridoxal 5'-phosphate 56-40-6, Glycine, analysis 56-41-7, Alanine, analysis 56-45-1, Serine, analysis 56-65-5, Atp, analysis 56-82-6, Glyceraldehyde 56-84-8, Aspartic acid, analysis 56-85-9, Glutamine, analysis 56-86-0, Glutamic acid, analysis 56-87-1, Lysine, analysis 57-10-3, Palmitic acid, analysis 57-11-4, Octadecanoic acid, analysis 57-48-7, Fructose, analysis 57-88-5, Cholesterol, analysis 58-61-7, Adenosine, analysis 58-64-0, Adp, analysis 58-68-4, Nadh 58-85-5, Biotin 58-86-6, Xylose, analysis 58-96-8, Uridine 58-97-9, Ump, analysis 58-98-0, Udp, analysis 59-23-4, Galactose, analysis 59-30-3, analysis 59-43-8, Thiamine, analysis 59-67-6, Nicotinic acid, analysis 60-18-4, Tyrosine, analysis 61-19-8, Amp, analysis 61-90-5, Leucine, analysis 63-37-6, Cmp 63-38-7, Cdp 63-39-8, Utp 63-68-3, Methionine, analysis 63-91-2, Phenylalanine, analysis 64-17-5, Ethanol, analysis 65-23-6, Pyridoxin 65-42-9, Lyxose 65-46-3, Cytidine 65-47-4, Ctp 68-19-9, Vitamin b12 69-93-2, Uric acid, analysis 70-47-3, Asparagine, analysis **71-00-1**, Histidine, analysis 72-18-4, Valine, analysis 72-19-5, Threonine, analysis 73-22-3, Tryptophan, analysis 73-32-5, Isoleucine, analysis 74-79-3, Arginine, analysis 79-83-4, Pantothenic acid 83-48-7, Stigmasterol 83-88-5, Riboflavin, analysis 85-32-5, Gmp 86-01-1, Gtp 107-43-7, Betaine 118-00-3, Guanosine, analysis 122-32-7, Triolein 134-35-0 143-07-7, Lauric acid, analysis 146-91-8, Gdp 147-81-9, Arabinose 147-85-3, Proline, analysis 365-07-1, Dtmp 365-08-2, Dttp 453-17-8, Triose 491-97-4, Dtdp 506-30-9, Arachidic acid 544-63-8, Myristic acid, analysis 555-43-1, Tristearin 555-44-2, Tripalmitin 557-59-5, Lignoceric acid 653-63-4, Damp 800-73-7, Dcdp 902-04-5, Dgmp 964-26-1, Dump 979-92-0, S-Adenosylhomocysteine 1032-65-1, Dcmp 1406-16-2, Vitamin d 1406-18-4, Vitamin e 1758-51-6, Erythrose 1927-31-7, Datp 2056-98-6, Dctp 2152-76-3, Idose 2564-35-4, Dgtp 2793-06-8, Dadp 3019-74-7, Sedoheptulose 3432-99-3 3458-28-4, Mannose 3493-09-2, Dgdp 4033-27-6 5556-48-9, Ribulose 5987-68-8, Altrose 6027-13-0, Homocysteine 6038-51-3, Allose 7439-89-6, Iron, analysis 7439-95-4, Magnesium, analysis 7439-96-5, Manganese, analysis 7439-98-7, Molybdenum, analysis **7440-02-0**, **Nickel**, analysis 7440-09-7, Potassium, analysis 7440-21-3, Silicon, analysis 7440-23-5,

Sodium, analysis 7440-31-5, Tin, analysis 7440-38-2, Arsenic, analysis 7440-42-8, Boron, analysis 7440-47-3, Chromium, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-62-2, Vanadium, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 7553-56-2, Iodine, analysis 7732-18-5, Water, analysis 7782-41-4, Fluorine, analysis 7782-44-7, Oxygen, analysis 7782-50-5, Chlorine, analysis 9004-34-6, Cellulose, analysis 9004-61-9, Hyaluronic acid 9005-25-8, Starch, analysis 9005-79-2, Glycogen, analysis 11103-57-4, Vitamin a 12001-79-5, Vitamin k 12672-30-9, Arsenic ion, analysis 15158-11-9, analysis 16887-00-6, Chloride, analysis 16984-48-8, Fluoride, analysis 19163-87-2, Gulose 29884-64-8, Threose 30077-17-9, Talose 42616-25-1, Methioninase
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying analytes)

IT **71-00-1**, Histidine, analysis **7440-02-0**, **Nickel**
, analysis
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying analytes)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

L45 ANSWER 10 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:842373 HCAPLUS
DOCUMENT NUMBER: 134:14929
TITLE: Fluorescence polarization assays involving polyions
INVENTOR(S): Nikiforov, Theo T.
PATENT ASSIGNEE(S): Caliper Technologies Corp., USA
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000072016	A1	20001130	WO 2000-US13293	20000511

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,

LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6287774	B1	20010911	US 1999-316447	19990521	
EP 1183536	A1	20020306	EP 2000-935963	20000511	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2003502620	T2	20030121	JP 2000-620353	20000511	
AU 762155	B2	20030619	AU 2000-51343	20000511	
NZ 515384	A	20030829	NZ 2000-515384	20000511	
CN 1130564	B	20031210	CN 2000-807851	20000511	
US 2002146703	A1	20021010	US 2001-865044	20010524	
ZA 2001009192	A	20021107	ZA 2001-9192	20011107	
US 2003175815	A1	20030918	US 2003-397887	20030326	

PRIORITY APPLN. INFO.:

US 1999-316447	A2	19990521
US 1999-139562P	P	19990616
US 1999-156366P	P	19990928
WO 2000-US13293	W	20000511
US 2001-865044	A1	20010524

AB Methods, systems, kits for carrying out a wide variety of different assays that comprise providing a first reagent mixt. which comprises a first reagent having a fluorescent label. A second reagent is introduced into the first reagent mixt. to produce a second reagent mixt., where the second reagent reacts with the first reagent to produce a fluorescently labeled product having a substantially different charge than the first reagent. A polyion is introduced into at least one of the first and second reagent mixts., and the fluorescent polarization in the second reagent mixt. relative to the first reagent mixt. is detd., this fluorescent polarization being indicative of the rate or extent of the reaction.

IC ICM G01N033-542
ICS C12Q001-48; C12Q001-42; C12Q001-37; C12Q001-68

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 3

IT Electric field
Fluids
Fluorescent probes
Mathematical methods
Nucleic acid hybridization
Phosphorylation, biological
Protein degradation
Protein sequences
Reaction
Test kits
(fluorescence polarization assays involving polyions)

IT Nucleic acids
Peptide nucleic acids
Peptides, uses
Phosphopeptides
Proteins, general, uses
Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence polarization assays involving polyions)

IT 9001-92-7, Protease 9013-05-2, Phosphatase 9025-75-6, **Protein**

Phosphatase 9026-43-1, **Protein** Kinase 9031-44-1, Kinase
RL: ANT (Analyte); ANST (Analytical study)
(fluorescence polarization assays involving polyions)
IT 14127-61-8, Calcium ion, uses **14701-22-5, Nickel**(2+),
uses 20074-52-6, Iron(3+), uses 23713-49-7, Zinc ion, uses
24937-47-1, Polyarginine 25104-18-1, Polylysine 25212-18-4,
Polyarginine **26062-48-6**, Polyhistidine **26854-81-9**,
Polyhistidine 38000-06-5, Polylysine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence polarization assays involving polyions)
IT **14701-22-5, Nickel**(2+), uses **26062-48-6**,
Polyhistidine **26854-81-9**, Polyhistidine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence polarization assays involving polyions)
RN 14701-22-5 HCAPLUS
CN Nickel, ion (Ni2+) (8CI, 9CI) (CA INDEX NAME)

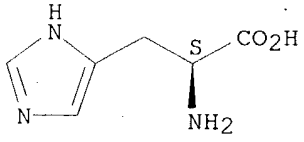
Ni^{2+}

RN 26062-48-6 HCAPLUS
CN L-Histidine, homopolymer (9CI) (CA INDEX NAME)

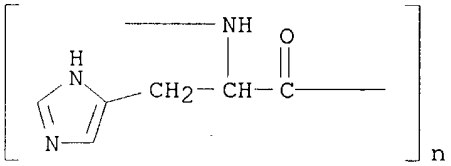
CM 1

CRN 71-00-1
CMF C6 H9 N3 O2

Absolute stereochemistry. Rotation (-).



RN 26854-81-9 HCAPLUS
CN Poly[imino[(1S)-1-(1H-imidazol-4-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI)
(CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:806605 HCAPLUS
DOCUMENT NUMBER: 133:360451

TITLE: High-throughput enzyme screening assays utilizing metal-chelate capture methodology
INVENTOR(S): Josiah, Serene; Boisclair, Michael
PATENT ASSIGNEE(S): Mitotix, Inc., USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6146842	A	20001114	US 1999-398341	19990917

PRIORITY APPLN. INFO.: US 1998-101196P P 19980921

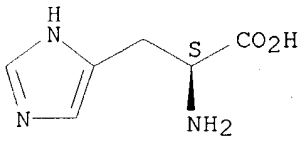
AB A high throughput enzyme screen has been developed which relies on metal chelate interaction for capture of the product of the enzymic reaction. In the present assay system, a detectable moiety is attached to a substrate having a chelating capturable moiety, which can be captured by an immobilized metal. Detection is effected due to the presence of a detectable label on the reaction product immobilized on the solid phase. Only signal assocd. with tagged protein bound to the solid phase is detected. The present assay can reliably measure enzyme activity, and has high reproducibility, which benefits high throughput screening. The detn. of prenyl transferase activity using the method is described.

IC ICM C12Q001-00
ICS C12Q001-48; A61K038-04
NCL 435015000
CC 7-1 (Enzymes)
IT **Scintillators**
(high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
IT **Proteins**, general, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(substrate; high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
IT 131384-38-8, Farnesyltransferase 135371-29-8, **Protein** geranylgeranyl transferase
RL: ANT (Analyte); ANST (Analytical study)
(high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
IT **7440-02-0, Nickel**, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-16-6, Rhodium, uses 7440-18-8, Ruthenium, uses 7440-70-2, Calcium, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
IT **71-00-1**, Histidine, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(tag; high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
IT **7440-02-0, Nickel**, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

IT **71-00-1**, Histidine, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(tag; high-throughput enzyme screening assays utilizing metal-chelate capture methodol.)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:176024 HCAPLUS
DOCUMENT NUMBER: 132:205118
TITLE: Particulate labels in which the hue of the label can be adjusted incrementally
INVENTOR(S): Kauvar, Lawrence M.; Sedat, John
PATENT ASSIGNEE(S): Trellis Bioinformatics, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000014545	A1	20000316	WO 1999-US19708	19990830
W: AU, CA, IL, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2001031464	A1	20011018	US 1998-146984	19980903
US 6642062	B2	20031104		
US 2001044116	A1	20011122	US 1999-332613	19990614
US 6492125	B2	20021210		
CA 2342767	AA	20000316	CA 1999-2342767	19990830
AU 9957908	A1	20000327	AU 1999-57908	19990830
EP 1110090	A1	20010627	EP 1999-945277	19990830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002524739	T2	20020806	JP 2000-569238	19990830

PRIORITY APPLN. INFO.:
US 1998-146984 A 19980903
US 1999-332613 A 19990614
WO 1999-US19708 W 19990830

see above

AB This invention describes particulate labels that can be individually identified and that comprise particulate supports to which are bound at least two distinguishable signal-generating moieties, such as **fluorophores** emitting at different wavelengths, which signals are detectable and measurable (in situ). By varying the ratio and/or amts. of the signal-generating moieties, a multiplicity of different and distinguishable labels is obtained. Each different label can then be coupled to a different reagent and the individual interactions of each reagent with a target obsd. in parallel. This invention offers the versatility of reagents and intensity of signal available through multihued beads wherein the particulate supports bearing signal-generating moieties are provided specific differentiable signals by virtue of these varying ratios. In addn., the labels can be evaluated not only in soln. or suspension, but their location can be established through use of microscopic techniques in evaluating the samples.

IC ICM G01N033-58

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 73

IT Chelating agents
(**nickel**; particulate labels in which hue of label can be adjusted incrementally)

IT Colorimetric indicators
Combinatorial library
Disulfide group
Drugs
Epitopes
Fluorescent indicators
Fluorescent substances
Fluorometry
Indicators
Labels
Metabolism
Molecules
(particulate labels in which hue of label can be adjusted incrementally)

IT **7440-02-0, Nickel**, analysis
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(chelator; particulate labels in which hue of label can be adjusted incrementally)

IT **71-00-1**, L-Histidine, analysis 9002-18-0, Agar
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(particulate labels in which hue of label can be adjusted incrementally)

IT **7440-02-0, Nickel**, analysis
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(chelator; particulate labels in which hue of label can be adjusted incrementally)

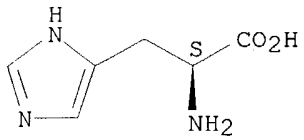
RN 7440-02-0 HCAPLUS

CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

IT **71-00-1**, L-Histidine, analysis
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(particulate labels in which hue of label can be adjusted incrementally)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 13 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:133710 HCAPLUS
DOCUMENT NUMBER: 132:175805
TITLE: Display of receptors and analysis of binding interactions and drug libraries
INVENTOR(S): Sklar, Larry A.; Prossnitz, Eric; Vilven, Janeen; Neldon, Donna
PATENT ASSIGNEE(S): University of New Mexico, USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000009539	A1	20000224	WO 1999-US18156	19990810
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9956721	A1	20000306	AU 1999-56721	19990810

PRIORITY APPLN. INFO.:
US 1998-96010P P 19980810
US 1999-370358 A 19990809
WO 1999-US18156 W 19990810

AB A display and method of prepg. 7-transmembrane and other receptors for real-time kinetic anal. of binding interactions is disclosed. The

invention includes display on beads and in micelles for multi-well and flow cytometric anal. The invention is useful for ligand discovery and drug action discovery, and G-protein response in particular.

IC ICM C07K001-00
ICS C07H021-04; G01N033-566

CC 1-1 (Pharmacology)
Section cross-reference(s): 9

ST drug discovery receptor display binding interaction; G **protein** response receptor binding interaction; library drug receptor display binding interaction; flow cytom drug discovery receptor display

IT Cell membrane
Combinatorial library
Drug design
Drug screening
Drugs
Fluorescent substances
Fluorometry
Immobilization, biochemical
Magnetic materials
Micelles
(receptor display and anal. of binding interactions and drug libraries)

IT Formyl peptide receptors
G **protein**-coupled receptors
G **proteins** (guanine nucleotide-binding **proteins**)
Ligands
Oligonucleotides
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(receptor display and anal. of binding interactions and drug libraries)

IT **7440-02-0, Nickel,** biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ni2+ silica beads; receptor display and anal. of binding interactions and drug libraries)

IT **2321-07-5, Fluorescein** 27072-45-3D, FITC, reaction product with peptides 67247-11-4D, reaction products with FITC
82354-19-6, Texas red
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(receptor display and anal. of binding interactions and drug libraries)

IT 13558-31-1D, derivs.
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**rhodamine**; receptor display and anal. of binding interactions and drug libraries)

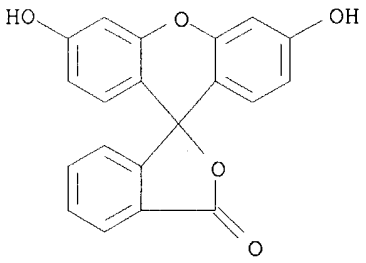
IT 58-85-5, Biotin **71-00-1,** L-Histidine, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tag; receptor display and anal. of binding interactions and drug libraries)

IT **7440-02-0, Nickel,** biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ni2+ silica beads; receptor display and anal. of binding interactions and drug libraries)

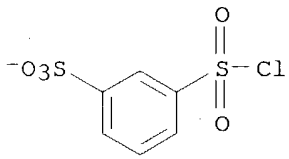
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

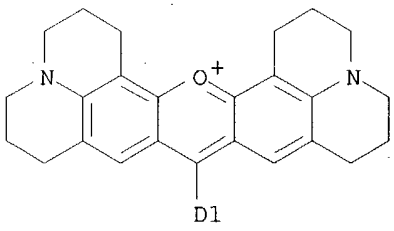
Ni

IT **2321-07-5, Fluorescein 82354-19-6, Texas red**
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(receptor display and anal. of binding interactions and drug libraries)
RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 82354-19-6 HCAPLUS
CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2(or 4)-(chlorosulfonyl)-4(or 2)-sulfophenyl]-2,3,6,7,12,13,16,17-octahydro-, inner salt (9CI) (CA INDEX NAME)

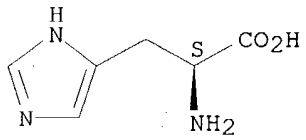




IT **71-00-1**, L-Histidine, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tag; receptor display and anal. of binding interactions and drug libraries)
RN 71-00-1 HCAPLUS

CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 14 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:189194 HCAPLUS
DOCUMENT NUMBER: 130:219108
TITLE: Methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation
INVENTOR(S): Carr, Francis Joseph; Carter, Graham; Hamilton, Anita; Adair, Fiona; Williams, Steven
PATENT ASSIGNEE(S): Biovation Limited, UK
SOURCE: PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9911777	A1	19990311	WO 1998-GB2649	19980903
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 754377	B2	20021114	AU 1998-87560	19980414
CA 2302147	AA	19990311	CA 1998-2302147	19980903
AU 9888792	A1	19990322	AU 1998-88792	19980903
EP 1003853	A1	20000531	EP 1998-940471	19980903
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001514850	T2	20010918	JP 2000-508788	19980903

PRIORITY APPLN. INFO.:

GB 1997-18552	A	19970903
GB 1997-19834	A	19970918
GB 1997-20184	A	19970924
GB 1997-20522	A	19970929
GB 1997-20523	A	19970929
GB 1997-20524	A	19970929
GB 1997-20525	A	19970929
US 1997-70037P	P	19971230
US 1997-70050P	P	19971230

US 1997-70062P	P	19971230
US 1997-70063P	P	19971230
GB 1998-1255	A	19980122
GB 1998-3828	A	19980225
GB 1998-7760	A	19980414
GB 1998-11130	A	19980523
EP 1998-940471	A	19980903
WO 1998-GB2649	W	19980903

AB A method of identifying genes by identifying gene products that interact with a specific ligand using ordered arrays of products formed by in vitro transcription and translation of individual clones is described. The method is particularly intended for use in screening cDNA libraries in cloning vectors using strong promoters, e.g., from bacteriophage T7. The translation products may be immobilized by a no. of methods including prior to release from ribosomes by immobilization of the ribosomes. The method can be adapted to high-d. high-throughput screening methods. Use of the methods to identify altered patterns of protein modification in tumors and in Alzheimer's disease disease are described. CDNAs from a normal colon library were transcribed and translated in vitro and incubated with proteins of normal colon and colorectal cancer tissues before fractionation on 2D gels. Of 2622 spots seen on gels, 12 showed different migration properties as a result of incubation with normal or tumor protein exts. An ordered cDNA library from human fetal brain was prepd. in Escherichia coli and the gene products from individual clones were immobilized on streptavidin coated plates by translation in the presence of tRNALys charged with biotinyllysine. These were screened for kinase substrates by incubating them with phosphorylation-competent exts. from brains of normal and Alzheimer's disease patients and more general interaction was assayed using **fluorescein**-labeled exts. A series of variations on the method, including the use of dicistronic constructs are described.

IC ICM C12N015-10
ICS C12N011-14; C07K017-00; C12Q001-68; C12P021-00; C12N015-12; C12N015-24; C12N015-49; C07K014-16; C07K014-54; C07K016-00

CC 3-1 (Biochemical Genetics)

ST cDNA library screening transcription translation ordered array; **protein** interaction cDNA library screening

IT Pilins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(F-pilins, as reporter mol. in liposomes, in screening for **protein** interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IRF (iron regulatory factor), immobilized for capture of ribosomes by mRNA binding; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RNA-binding, immobilized for capture of ribosomes by mRNA binding; methods for screening DNA libraries by screening ordered arrays of gene

products generated by in vitro transcription and translation)
IT Alzheimer's disease
(altered patterns of **protein** phosphorylation in; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Porins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter mol. in liposomes, in screening for **protein** interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Intestine, neoplasm
(colorectal, altered patterns of **protein** modification in; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Ribosome
(immobilization of nascent **protein**-contg.; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Translation, genetic
(inhibition, **proteins** of, immobilized for capture of ribosomes by mRNA binding; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Molecular association
(of **proteins**, in screening cDNA libraries; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Immobilization, biochemical
(**protein**, of translation products or ribosomes; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Phosphorylation, biological
(**protein**, screening for substrates for; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT Liposomes
(reporter mol.-contg., in screening for **protein** interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(translation-inhibiting, immobilized for capture of ribosomes by mRNA binding; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT **26062-48-6**, Polyhistidine **26854-81-9**, Polyhistidine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as affinity label; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)
IT **7440-02-0**, **Nickel**, analysis 9003-99-0, Peroxidase 9031-11-2, .beta.-Galactosidase
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter mol. in liposomes, in screening for **protein**

interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

IT 9001-86-9D, Phospholipase C, fusion **proteins**
RL: ARU (Analytical role, unclassified); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(liposome lysis using, in screening for **protein** interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

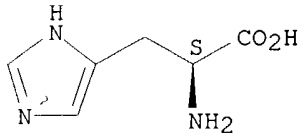
IT **26062-48-6**, Polyhistidine **26854-81-9**, Polyhistidine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as affinity label; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

RN 26062-48-6 HCAPLUS
CN L-Histidine, homopolymer (9CI) (CA INDEX NAME)

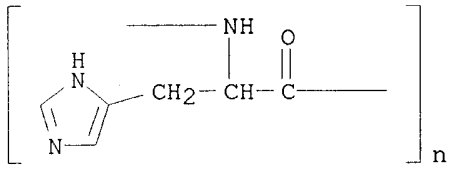
CM 1

CRN 71-00-1
CMF C6 H9 N3 O2

Absolute stereochemistry. Rotation (-).



RN 26854-81-9 HCAPLUS
CN Poly[imino[(1S)-1-(1H-imidazol-4-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



IT **7440-02-0, Nickel**, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter mol. in liposomes, in screening for **protein** interactions; methods for screening DNA libraries by screening ordered arrays of gene products generated by in vitro transcription and translation)

RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 15 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:716219 HCAPLUS
DOCUMENT NUMBER: 129:313117
TITLE: Method and immunoassay assembly for the detection of biological materials using a capture phase with immobilized reagent
INVENTOR(S): Elaissari, Abdelhamid; Duracher, David; Pichot, Christian; Mallet, Francois; Novelli-Rousseau, Armelle
PATENT ASSIGNEE(S): Bio Merieux, Fr.
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847000	A2	19981022	WO 1998-FR772	19980416
WO 9847000	A3	19990211		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
FR 2762394	A1	19981023	FR 1997-4923	19970416
FR 2762394	B1	19990528		
AU 9874362	A1	19981111	AU 1998-74362	19980416
EP 975968	A2	20000202	EP 1998-921550	19980416
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001521625	T2	20011106	JP 1998-543572	19980416
US 2002160526	A1	20021031	US 2000-403085	20000107

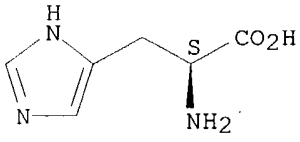
PRIORITY APPLN. INFO.: FR 1997-4923 A 19970416
WO 1998-FR772 W 19980416

AB The invention concerns a method for isolating a target biol. material contained in a sample, consisting of the following steps: providing a capture phase, in microparticulate or linear form, consisting of at least a first particulate or linear polymer, with apparent hydrophile character and first complexing groups, the latter being bound by co-ordination to a first transition metal, which is itself bound to a first biol. entity capable of specifically recognizing the target biol. material; contacting said target biol. material with at least the capture phase; and detecting the capture phase-target biol. material complex, optionally with a detection phase, in microparticulate or linear form, and consisting of at least a second particulate or linear polymer, with apparent hydrophile character and second complexing groups, the latter being bound by co-ordination to a second transition metal, which is itself bound to a second biol. entity capable of specifically recognizing the target biol. material, and a marker. Markers are e.g. enzymes, fluorescent dyes, magnetic particles, antigens, heptanes, antibodies. Thus

styrene-N-isopropylacrylamide copolymer was functionalized with 2-aminoethyl methacrylate; poly(N-isopropylacrylamide) was functionalized with maleic anhydride-methylvinylether copolymer and grafted to the amino-group contg. polymer. Zn2+ was bound to the complexation groups and the recombinant protein RH24 with a histidine tag was immobilized to obtain the capturing phase.

IC ICM G01N033-543
CC 9-10 (Biochemical Methods)
IT **Proteins**, specific or class
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immobilized onto graft polyme-transient metal complexes; method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
IT Biological materials
Fluorescent dyes
Immobilization, biochemical
(method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
IT 52-90-4, L-Cysteine, properties **71-00-1**, L-Histidine, properties
RL: PRP (Properties)
(method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
IT 97-65-4, Itaconic acid, reactions 7439-92-1, Lead, reactions 7439-95-4, Magnesium, reactions 7439-96-5, Manganese, reactions **7440-02-0**, **Nickel**, reactions 7440-05-3, Palladium, reactions 7440-06-4, Platinum, reactions 7440-48-4, Cobalt, reactions 7440-50-8, Copper, reactions 7440-57-5, Gold, reactions 7440-66-6D, Zinc, complex with graft polymer, reactions 7659-36-1D, 2-Propenoic acid, 2-methyl-, 2-aminoethyl ester, reaction with styrene-N-isopropylacrylamide copolymer and grafted with maleic anhydride-methylvinylether copolymer functionalized poly(N-isopropylacrylamide)
RL: RCT (Reactant); RACT (Reactant or reagent)
(method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
IT **71-00-1**, L-Histidine, properties
RL: PRP (Properties)
(method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **7440-02-0**, **Nickel**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(method and immunoassay assembly for detection of biol. materials using a capture phase with immobilized reagent)
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

L45 ANSWER 16 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:661040 HCAPLUS
DOCUMENT NUMBER: 125:299474
TITLE: Preparation of an autolysis-resistant interleukin-1.beta. converting enzyme mutant
AUTHOR(S): Dang, Luan C.; Talanian, Robert V.; Banach, David; Hackett, Maria C.; Gilmore, John L.; Hays, Sheryl J.; Mankovich, John A.; Brady, Kenneth D.
CORPORATE SOURCE: BASF Bioresearch Corporation, Worcester, MA, 01605, USA
SOURCE: Biochemistry (1996), 35(47), 14910-14916
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We describe the expression, purifn., and characterization of human interleukin-1.beta. converting enzyme (ICE) contg. an affinity tag and modified to resist autoproteolysis. The point mutation Asp381 to Glu was added to eliminate the major site of autolytic degrdn. while maintaining catalytic activity, and an N-terminal polyhistidine tag was added in place of the ICE pro-region to facilitate purifn. N-His (D381E) ICE was expressed in Escherichia coli and purified by **nickel**-chelating Sepharose and size-exclusion chromatog. (SEC). The enzyme was stabilized greater than 80-fold against autolytic degrdn. relative to wild-type N-His ICE. SDS-PAGE anal. with silver-staining revealed no impurities, and 85% of the protein was catalytically active as detd. by titrn. with a novel titrant, PD 163594 (3-[2-(2-benzyloxycarbonylamino-3-methylbutyrylamino)propionylamino]-4-oxo-5-(2-oxo-2H-chromen-7-yloxypentanoic acid)). An oxidized adduct of ICE with glutathione, formed by disulfide rearrangement with oxidized glutathione to inhibit and stabilize the enzyme during purifn., was rapidly reduced upon exposure to 5 mM DTT. One mole of glutathione was released per mol of active enzyme. Of the nine cysteines in ICE, eight were present in their reduced form in the glutathione adduct. N-His (D381E) ICE cleaved Ac-YVAD-Amc with the Michaelis-Menten parameters KM = 14 .mu.M and kcat = 0.7 s-1, values essentially identical to those reported for enzyme from natural sources.

CC 16-5 (Fermentation and Bioindustrial Chemistry)
Section cross-reference(s): 3, 7

IT **Fluorescent substances**
(probes, autolysis-resistant interleukin-1.beta. converting enzyme mutant prepn. using fermn., polyhistidine tag and affinity purifn., and synthetic fluorescent titrant)

IT **26062-48-6DP**, Polyhistidine, interleukin-1.beta. converting enzyme mutant affinity-tagged derivs. **26854-81-9DP**, Polyhistidine, interleukin-1.beta. converting enzyme mutant affinity-tagged derivs. 122191-40-6DP, Interleukin-1.beta. Converting Enzyme, mutant polyhistidine-tagged derivs.
RL: ANT (Analyte); BMF (Bioindustrial manufacture); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(autolysis-resistant interleukin-1.beta. converting enzyme mutant prepn. using fermn., polyhistidine tag and affinity purifn., and

synthetic fluorescent titrant)

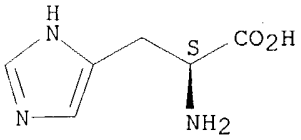
IT **26062-48-6DP**, Polyhistidine, interleukin-1.beta. converting enzyme mutant affinity-tagged derivs. **26854-81-9DP**, Polyhistidine, interleukin-1.beta. converting enzyme mutant affinity-tagged derivs.
RL: ANT (Analyte); BMF (Bioindustrial manufacture); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(autolysis-resistant interleukin-1.beta. converting enzyme mutant prepn. using fermn., polyhistidine tag and affinity purifn., and synthetic fluorescent titrant)

RN 26062-48-6 HCAPLUS
CN L-Histidine, homopolymer (9CI) (CA INDEX NAME)

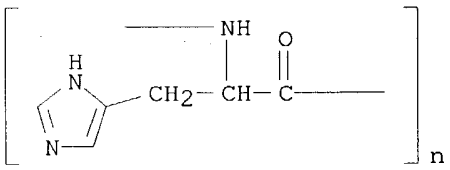
CM 1

CRN 71-00-1
CMF C6 H9 N3 O2

Absolute stereochemistry. Rotation (-).



RN 26854-81-9 HCAPLUS
CN Poly[imino[(1S)-1-(1H-imidazol-4-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



L45 ANSWER 17 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:473272 HCAPLUS
DOCUMENT NUMBER: 125:109681
TITLE: Technique for joining amino acid sequences and novel composition useful in immunoassays
INVENTOR(S): Peterson, Darrell L.
PATENT ASSIGNEE(S): Center for Innovative Technology, USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9619730	A1	19960627	WO 1995-US16328	19951215
W: AU, CA, ES, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5840834	A	19981124	US 1994-360360	19941221
US 5674677	A	19971007	US 1995-572441	19951214
AU 9645994	A1	19960710	AU 1996-45994	19951215

PRIORITY APPLN. INFO.:

US 1994-360360	19941221
US 1995-572441	19951214
WO 1995-US16328	19951215

AB Two amino acid sequences are joined together by using an electron acceptor moiety and a linking moiety, such as a chelating agent. In particular, an amino acid sequence specific for binding to a material of interest is linked to an enzyme that acts on an indicator such as a colorimetric, phosphorescent, fluorescent, or chemiluminescent substrate. The linking compn. is useful in immunoassays. Examples show the ability of the combination of org. chelator, metal ion, enzyme, and protein to detect antibodies to a variety of viruses (e.g., bovine immunodeficiency virus, feline immunodeficiency virus, caprine arthritis and encephalitis virus, hepatitis B virus, hepatitis C virus) in blood.

IC ICM G01N033-53

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 14, 15

ST **protein** conjugate enzyme immunoassay antibody detn; blood virus antibody detection immunoassay; immunodeficiency virus antibody detection blood

IT Peptides, preparation
Proteins, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(enzyme conjugates; peptide or **protein** conjugates prepn. for immunoassay)

IT Blood analysis
Chelating agents
Electron acceptors
Fluorescent substances
Immunoassay
Phosphorescent substances
(peptide or **protein** conjugates prepn. for immunoassay)

IT Antibodies
Antigens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(peptide or **protein** conjugates prepn. for immunoassay)

IT Enzymes
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**protein** conjugates; peptide or **protein** conjugates prepn. for immunoassay)

IT **Proteins**, specific or class
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(NS3 (nonstructural, 3), peptide or **protein** conjugates prepn. for immunoassay)

IT Virus, animal
(bovine immunodeficiency, peptide or **protein** conjugates prepn. for immunoassay)

IT Virus, animal

(caprine arthritis-encephalitis, peptide or **protein** conjugates prepn. for immunoassay)

IT **Luminescent substances**
(chemi-, peptide or **protein** conjugates prepn. for immunoassay)

IT **Proteins**, specific or class
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(core, peptide or **protein** conjugates prepn. for immunoassay)

IT Immunoassay
(enzyme-linked immunosorbent assay, peptide or **protein** conjugates prepn. for immunoassay)

IT Virus, animal
(feline immunodeficiency, peptide or **protein** conjugates prepn. for immunoassay)

IT Virus, animal
(hepatitis B, peptide or **protein** conjugates prepn. for immunoassay)

IT Antigens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis B surface, pre-S **protein**, peptide or **protein** conjugates prepn. for immunoassay)

IT Virus, animal
(hepatitis C, peptide or **protein** conjugates prepn. for immunoassay)

IT **Proteins**, specific or class
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(oligohistidine-terminated, peptide or **protein** conjugates prepn. for immunoassay)

IT 9001-78-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(peptide or **protein** conjugates prepn. for immunoassay)

IT 9003-99-0DP, Peroxidase, carboxymethyllysine conjugates 113231-05-3DP, enzyme conjugates
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(peptide or **protein** conjugates prepn. for immunoassay)

IT **71-00-1DP**, Histidine, **proteins** contg.
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(peptide or **protein** conjugates prepn. for immunoassay)

IT 139-13-9, Nitrilotriacetic acid 142-73-4, Iminodiacetic acid 1245-13-2, Bicinchoninic acid **7440-02-0**, **Nickel**, analysis 7440-50-8, Copper, analysis 7440-66-6, Zinc, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(peptide or **protein** conjugates prepn. for immunoassay)

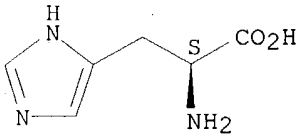
IT 79-08-3, Bromoacetic acid 1155-64-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(peptide or **protein** conjugates prepn. for immunoassay)

IT **71-00-1DP**, Histidine, **proteins** contg.
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(peptide or **protein** conjugates prepn. for immunoassay)

RN 71-00-1 HCAPLUS

CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **7440-02-0, Nickel,** analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(peptide or **protein** conjugates prepn. for immunoassay)
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

L45 ANSWER 18 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:836023 HCAPLUS
DOCUMENT NUMBER: 123:222006
TITLE: Engineering **Protein**-Lipid Interactions: Targeting of Histidine-Tagged **Proteins** to Metal-Chelating Lipid Monolayers
AUTHOR(S): Ng, Kingman; Pack, Daniel W.; Sasaki, Darryl Y.; Arnold, Frances H.
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering 210-41, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Langmuir (1995), 11(10), 4048-55
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In an effort to devise simple and robust systems that can reproduce in synthetic membranes important features of biol. targeting and surface assembly, a versatile system for targeting proteins to lipid membranes has been developed. This system utilizes metal-chelating iminodiacetate (IDA) lipids loaded with divalent metal ions (Cu2+ or Ni2+) to target proteins genetically modified with a poly(histidine) fusion peptide. The new pyrene-labeled iminodiacetate lipid 2 can be used for fluorescence imaging and spectroscopic studies of lipid reorganization induced by protein binding and assembly on lipid membranes. Metal-chelating IDA lipids 1 and 2 target the sol. domain of cytochrome b5 to lipid assemblies by sharing the metal ion with a six-histidine sequence appended to the protein C-terminus. Protein binding to Langmuir monolayers contg. the IDA-Cu2+ lipids 1 and 2 is obsd. by monitoring increases in the monolayer area at a surface pressure high enough to block nonspecific protein insertion (25 mN/m). The His-tagged cytochrome b5 binds the Cu2+-loaded 2 monolayer with high affinity (Kd < 50 nM). No binding is obsd. in the absence of metal ions or for cytochrome b5 without the 6-His fusion peptide. Specific protein targeting to the monolayer loaded with Ni2+ is confirmed by fluorescence microscopy of **fluorescein**-labeled 6-His

cytochrome b5. The poly(histidine) fusion peptide, widely used for recombinant protein purifn., makes this targeting approach applicable to a large no. of proteins.

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 6

ST engineering **protein** lipid interaction; histidine tagged metal chelating monolayer

IT Lipids, processes
Proteins, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT **Proteins**, specific or class
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(histidine-tagged; engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT Imaging
RL: ANT (Analyte); ANST (Analytical study)
(fluorescent, engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT 168479-19-4D, copper complexes
RL: NUU (Other use, unclassified); USES (Uses)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT **71-00-1D**, Histidine, -tagger **proteins** **7440-02-0D**
, **Nickel**, -chelating lipid monolayers 7440-50-8D, Copper,
-chelating lipid monolayers 9035-39-6, Cytochrome b5 60202-16-6,
Protein C
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT 6290-05-7, Diethyl iminodiacetate 86334-56-7 168479-17-2 168479-18-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

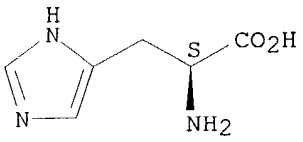
IT 168479-11-6P 168479-12-7P 168479-13-8P 168479-14-9P 168479-15-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT 168479-16-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid monolayers)

IT **71-00-1D**, Histidine, -tagger **proteins** **7440-02-0D**
, **Nickel**, -chelating lipid monolayers
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(engineering **protein**-lipid interactions: targeting of histidine-tagged **proteins** to metal-chelating lipid

monolayers)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

L45 ANSWER 19 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:787305 HCAPLUS
DOCUMENT NUMBER: 123:187323
TITLE: Enzyme amplified competitive and sandwich chelation assays for metal ions
INVENTOR(S): Hammock, Bruce D.; Szurdoki, Ferenc; Kido, Horacio
PATENT ASSIGNEE(S): Regents of the University of California, USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9514926	A1	19950601	WO 1994-US13346	19941116
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5459040	A	19951017	US 1993-156567	19931122
CA 2172620	AA	19950601	CA 1994-2172620	19941116
EP 730737	A1	19960911	EP 1995-902611	19941116
R: DE, FR, GB				
JP 09505667	T2	19970603	JP 1994-515153	19941116
PRIORITY APPLN. INFO.:			US 1993-156567	19931122
			WO 1994-US13346	19941116

AB The present invention provides methods for assaying for a metal ion in a sample. In one aspect, the present invention relates to an enzyme amplified sandwich assay. This method relies upon the ability of the metal ion to form a complex with two chelators. Such an assocn. is termed a sandwich complex with the metal ion forming the middle of the sandwich. In this method the 1st chelator is immobilized on a solid support, while the 2nd chelator is linked to a reporter group. This arrangement forms a highly selective, sensitive, and convenient system for the quant. detection of metal ions. This approach combines the specific recognition of the metal ion by the 1st and 2nd chelators, with the great signal

amplification offered by enzymes or other reporter groups. In another aspect, the present invention relates to a competitive assay that relies on the competitive inhibition of complex formation between a chelator immobilized on a solid support and an organometallic compd. attached to a reporter group, by the metal ions of interest in a sample.

IC ICM G01N033-20
ICS G01N033-58; G01N033-535

CC 79-6 (Inorganic Analytical Chemistry)

IT **Fluorescent substances**
(reporter group; metal detn. by enzyme amplified competitive and sandwich chelation assays)

IT 7439-92-1, Lead, analysis 7439-96-5, Manganese, analysis 7439-97-6, Mercury, analysis **7440-02-0, Nickel**, analysis 7440-05-3, Palladium, analysis 7440-22-4, Silver, analysis 7440-28-0, Thallium, analysis 7440-36-0, Antimony, analysis 7440-38-2, Arsenic, analysis 7440-41-7, Beryllium, analysis 7440-43-9, Cadmium, analysis 7440-45-1, Cerium, analysis 7440-47-3, Chromium, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-57-5, Gold, analysis 7440-61-1, Uranium, analysis 7440-66-6, Zinc, analysis 7440-67-7, Zirconium, analysis 7782-49-2, Selenium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(metal detn. by enzyme amplified competitive and sandwich chelation assays)

IT 52-66-4, D,L-Penicillamine 59-52-9, 2,3-Dimercaptopropanol 60-10-6, Diphenylthiocarbazone **71-00-1**, Histidine, analysis 74-61-3, 2,3-Dimercaptopropanesulfonic acid 85-85-8, 1-(2-Pyridylazo)-2-naphthol 87-02-5 123-54-6, Acetylacetone, analysis 594-07-0, Dithiocarbamic acid 1141-59-9, 4-(2-Pyridylazo)resorcinol 52018-85-6, 2-(3-Sulfobenzoyl)pyridine-2-pyridylhydrazone
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(sandwich chelator; metal detn. by enzyme amplified competitive and sandwich chelation assays)

IT **7440-02-0, Nickel**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(metal detn. by enzyme amplified competitive and sandwich chelation assays)

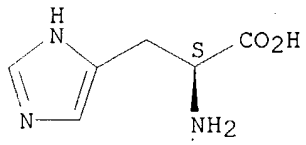
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

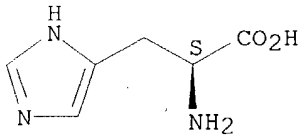
Ni

IT **71-00-1**, Histidine, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(sandwich chelator; metal detn. by enzyme amplified competitive and sandwich chelation assays)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).





L45 ANSWER 20 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:404012 HCAPLUS
DOCUMENT NUMBER: 119:4012
TITLE: Engineering metal coordination sites into the antibody light chain
AUTHOR(S): Wade, Warren S.; Koh, Jong S.; Han, Nianhe; Hoekstra, Denise M.; Lerner, Richard A.
CORPORATE SOURCE: Dep. Chem. Mol. Biol., Scripps Res. Inst., La Jolla, CA, 92037, USA
SOURCE: Journal of the American Chemical Society (1993), 115(11), 4449-56
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A three-histidine Zn2+ binding site based on the carbonic anhydrase B site has been engineered into the four available sites on the light chain of the **fluorescein** binding antibody 4-4-20. All mutant antibodies bind **fluorescein**. Transition metal binding was assayed by tryptophan fluorescence quenching. Two of the four sites exhibit metal affinities consistent with complexation by three ligands. The specificity of the highest affinity site was probed by mutagenesis. For various combinations of histidine, aspartate, and glutamate residues, affinities range from -5 to -10 kcal/mol for Cu2+, -3 to -6.5 kcal/mol for Zn2+, and -3 and -5.5 kcal/mol for Cd2+. Binding is also obsd. between at least one mutant and Co2+ or Ni2+. The second highest affinity site shows a metal-dependent increase in **fluorescein** binding, indicating a ternary complex. Several ligand combinations give affinities in a potentially useful range for antibody catalysis with only four amino acid changes.

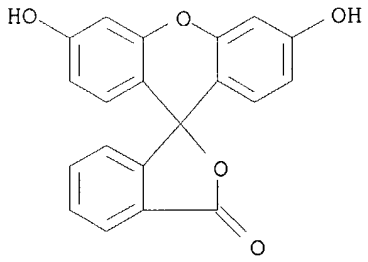
CC 7-8 (Enzymes)
ST catalytic antibody coordination transition metal engineering; **fluorescein** catalytic antibody transition metal engineering
IT Antibodies
RL: BIOL (Biological study)
(catalytic, to **fluorescein**, transition metal binding by light chain of, mutation in engineering of site for)
IT **7440-02-0, Nickel**, biological studies 7440-43-9, Cadmium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies
RL: BIOL (Biological study)
(antifluorescein catalytic antibody light chain binding by, mutation in engineering of site for)
IT **2321-07-5, Fluorescein**
RL: BIOL (Biological study)
(catalytic antibody light chain to, transition metal binding by, mutation in engineering of site for)
IT 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies **71-00-1**, Histidine, biological studies

RL: BIOL (Biological study)
(of antifluorescein catalytic antibody light chain, in binding by transition metal)

IT **7440-02-0, Nickel,** biological studies
RL: BIOL (Biological study)
(antifluorescein catalytic antibody light chain binding by, mutation in engineering of site for)
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

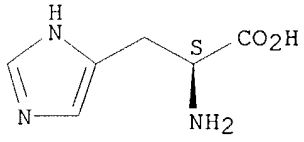
Ni

IT **2321-07-5, Fluorescein**
RL: BIOL (Biological study)
(catalytic antibody light chain to, transition metal binding by, mutation in engineering of site for)
RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)



IT **71-00-1,** Histidine, biological studies
RL: BIOL (Biological study)
(of antifluorescein catalytic antibody light chain, in binding by transition metal)
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L45 ANSWER 21 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:192479 HCAPLUS
DOCUMENT NUMBER: 116:192479
TITLE: Metal-binding Ig variable domain **proteins**
INVENTOR(S): Lerner, Richard A.; Roberts, Victoria N.; Getzoff, Elisabeth D.; Tainer, John A.; Benkovic, Stephen J.

PATENT ASSIGNEE(S): Scripps Clinic and Research Foundation, USA
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9116912	A1	19911114	WO 1991-US3149	19910507
W: AU, CA, FI, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2081213	AA	19911109	CA 1991-2081213	19910507
AU 9178892	A1	19911127	AU 1991-78892	19910507
AU 651348	B2	19940721		
JP 05507089	T2	19931014	JP 1991-509846	19910507
EP 597842	A1	19940525	EP 1991-909827	19910507
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
NO 9204281	A	19921106	NO 1992-4281	19921106
US 5665865	A	19970909	US 1994-343658	19941122

PRIORITY APPLN. INFO.: US 1990-521258 19900508
US 1990-539980 19900618
WO 1991-US3149 19910507
US 1993-64795 19930519

AB The title proteins can form a coordination complex with a metal cation. The protein contains (1) a sequence of amino acid residues that defines a variable domain of an Ig; and (2) 3 contact amino acid residues in the variable domain of 1 that define a metal-binding site. Identification of Ig variable domain sites for introducing a metal ligand, as well as catalytic antibody design, are discussed. Recombinant prodn. of QM212 (a single-chain antigen-binding protein derived from a light chain portion of an antifluorescein monoclonal antibody) is described. QM212 simultaneously bound both Cu(II) and **fluorescein**.

IC ICM A61K035-14
ICS C07K015-22; C07K015-28

CC 15-3 (Immunochemistry)
Section cross-reference(s): 3, 7

ST metal binding Ig variable region; cloning DNA metalloantibody; catalytic antibody metal binding; **protein** Ig fragment metal binding; copper binding metalloantibody

IT Deoxyribonucleic acid sequences
Protein sequences
(for QM212 model metalloantibody)

IT Antibodies
RL: BIOL (Biological study)
(monoclonal, to **fluorescein**, model metalloantibody derived from)

IT **7440-02-0D, Nickel**, complexes with Ig variable region domains 7440-43-9D, Cadmium, complexes with Ig variable region domains 7440-48-4D, Cobalt, complexes with Ig variable region domains 7440-50-8D, Copper, complexes with Ig variable region domains 7440-66-6D, Zinc, complexes with Ig variable region domains
RL: PRP (Properties)
(divalent, for metalloantibody)

IT 52-90-4, Cysteine, biological studies 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies **71-00-1**,

Histidine, biological studies
RL: BIOL (Biological study)
(metal binding to, of Ig variable region domain, metalloantibody in relation to)

IT **2321-07-5, Fluorescein**
RL: PRP (Properties)
(monoclonal antibody to, model metalloantibody derived from)

IT **7440-02-0D, Nickel,** complexes with Ig variable region domains
RL: PRP (Properties)
(divalent, for metalloantibody)

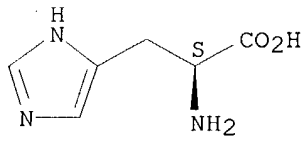
RN 7440-02-0 HCAPLUS
CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

IT **71-00-1,** Histidine, biological studies
RL: BIOL (Biological study)
(metal binding to, of Ig variable region domain, metalloantibody in relation to)

RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **2321-07-5, Fluorescein**
RL: PRP (Properties)
(monoclonal antibody to, model metalloantibody derived from)

RN 2321-07-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- (9CI) (CA INDEX NAME)